

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 1) A standard cost is the budgeted cost for a single unit of product. 1) _____
- 2) The difference between actual results and the budget is called a variance. 2) _____
- 3) A favourable variance decreases operating income. 3) _____
- 4) An unfavourable variance decreases operating income. 4) _____
- 5) Favourable variances should always be considered "good" for the organization. 5) _____
- 6) A standard cost is the benchmark for evaluating actual costs. 6) _____
- 7) A company that produces many different products will develop only one standard cost. 7) _____
- 8) A company that produces many different products will develop a standard cost for each product. 8) _____
- 9) Ideal standards allow for normal amounts of waste and inefficiency. 9) _____
- 10) Ideal standards are also known as perfection standards. 10) _____
- 11) Practical standards allow for normal amounts of waste and inefficiency. 11) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 12) A standard cost can be thought of as 12) _____
 - A) the budgeted selling price for a single unit of product.
 - B) the budgeted cost for a single unit of product.
 - C) the regular selling price for a single unit of product.
 - D) the average cost for a single unit of product.

- 13) The difference between Ideal Standards and Practical Standards is 13) _____
- A) ideal standards are based on managers' estimates of the best conditions whereas Practical standards are based on managers' reasonable estimates of conditions.
 - B) ideal standards are based on perfect conditions whereas Practical standards are based on currently attainable conditions.
 - C) ideal standards are perfection standards whereas Practical standards are average standards.
 - D) ideal standards are based on attainable conditions whereas Practical standards are based on managers' estimates.
- 14) A variance is 14) _____
- A) the difference between actual results and the budget.
 - B) always unfavourable.
 - C) only exists for manufacturing costs.
 - D) always favourable.
- 15) A favourable variance 15) _____
- A) indicates something that will increase operating income.
 - B) indicates something that will decrease operating income.
 - C) is always good for the organization.
 - D) does not need to be investigated.
- 16) An unfavourable variance 16) _____
- A) indicates something that will decrease operating income.
 - B) is always bad for the organization.
 - C) indicates something that will increase operating income.
 - D) does not need to be investigated.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 17) Turbo Inc sells its only product for \$11.50 per unit. Variable costs total \$4.50 per unit and fixed costs are \$195,000 up to a maximum of 60,000 units. Sales above 60,000 units require additional space and fixed costs increase to \$295,000. 17) _____

Prepare a flexible budget for volumes of 50,000, 60,000, and 70,000 units.

18) Turbo Inc has only one product. Its budget income statement for 55,000 units is as follows 18) _____

Revenue	\$ 687,500
Variable Costs	
Cost of goods sold	\$ 357,500
Sales Commissions	\$ 68,750
Fixed Costs	
Salary	\$ 210,000
Depreciation	\$ 15,000
Rent	\$ 24,000
Utilities	\$ 12,000
Total Expenses	\$ 687,250
Operating Income	\$ 250

Plant capacity is 64,000 units. If that happens, salaries will increase by 15%, depreciation will increase by 20%, and rent and fixed utilities will increase by 25%

Prepare a flexible budget income statements for volumes of 58,000, 63,000. and 68,000 unit

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 19) A standard cost for production inputs is a carefully predetermined cost that usually is expressed on a per-unit basis. 19) _____
- 20) The standard for the direct labour rate per hour includes fringe benefits such as health care insurance and vacations. 20) _____
- 21) The price sensitivity of consumers can be studied using standard costing. 21) _____
- 22) The standard cost of inputs is determined by multiplying the actual price by the standard quantity allowed for the output achieved. 22) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 23) Which term below is best paired with "a budget for a single unit"? 23) _____
 A) Production volume variance B) Overhead flexible budget variance
 C) Standard cost D) Static budget
- 24) Which of the following is a carefully predetermined cost that is usually expressed on a per unit basis? 24) _____
 A) Applied cost B) Flexible cost C) Standard cost D) Allocated cost

- 25) Blackwell Manufacturing, which produces flip-flops, is developing direct material standards. Blackwell purchases the special foam it uses from a supplier overseas. Blackwell buys foam in 20,000 kilogram shipments at a cost of \$10,000. Freight in costs \$500 per shipment. What is the price standard for foam? 25) _____
- A) \$10,500.00 / kilogram B) \$ 0.50 / kilogram
C) \$ 10,000.00 / kilogram D) \$ 0.525 / kilogram
- 26) Blackwell Manufacturing, which produces flip-flops, is developing direct material standards. Blackwell purchases the special foam it uses from a supplier overseas. Blackwell buys foam in 10,000 kilogram shipments at a cost of \$10,000. Freight to have the foam delivered costs \$500 per shipment and Blackwell pays \$600 per shipment in brokerage fees. What is the price standard for foam? 26) _____
- A) \$ 1.00 / kilogram B) \$1.11 / kilogram
C) \$ 1.05 / kilogram D) \$ 1.06 / kilogram
- 27) Blackwell Manufacturing, which produces flip-flops, is developing direct material standards. Each flip-flop requires 0.52 kilograms of a special foam. Unavoidable waste and spoilage is 0.02 kilograms per flip-flop. What is the standard quantity of foam per flip-flop? 27) _____
- A) 0.54 kilograms B) 0.57 kilograms C) 0.52 kilograms D) 0.55 kilograms
- 28) Nadia Corporation, which manufactures straw hats, is developing direct labour standards. The basic direct labour rate is \$15.00 per hour. Payroll taxes are 10% of the basic direct labour rate, while fringe benefits such as vacation and health care insurance, are \$4.00 per hour. What is the standard rate per direct labour hour? 28) _____
- A) \$10.00 B) \$20.50 C) \$11.20 D) \$14.00
- 29) Bug Off Corporation, which produces citronella candles, is developing direct material standards. Each candle requires 0.65 kilograms of wax. Unavoidable waste and spoilage is 0.11 kilograms per candle. What is the standard quantity of wax per candle? 29) _____
- A) 0.69 kilograms B) 0.76 kilograms C) 0.65 kilograms D) 0.72 kilograms
- 30) Wolanin Corporation, which manufactures straw hats, is developing direct labour standards. The basic direct labour rate is \$20.00 per hour. Payroll taxes are 15% of the basic direct labour rate, while fringe benefits such as vacation and health care insurance, are \$5.00 per hour. What is the standard rate per direct labour hour? 30) _____
- A) \$20.00 B) \$25.00 C) \$23.00 D) \$28.00
- 31) Compute the total standard cost per book for Publisher's Company using the following information 31) _____
1. Direct Materials: 1 ream of paper allowed per book, at \$5.00 per ream.
 2. Direct Labour: 0.35 labour-hours of input allowed per book, at \$17.50 per direct labour hour (DLH).
 3. Variable Manufacturing Overhead: assigned at \$20 per direct labour hour (DLH)
- A) \$18.13 per output unit B) \$11.13 per output unit
C) \$47.50 per output unit D) \$17.38 per output unit

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 32) McClean supplies restaurants with many sanitation supplies (such as paper towels and so 32) _____
Assume that the manufacturing plant processing the sanitation supplies anticipated incur total of \$6,160,000 of manufacturing overhead during the year. Of this amount, \$2,640,000 fixed. Manufacturing overhead is allocated based on machine hours. The plant anticipates running the machines 440,000 hours next year.

Required:

1. Compute the standard variable overhead rate.
2. Compute the fixed overhead rate.
3. Compute the standard total overhead rate.

- 33) McClean supplies restaurants with many sanitation supplies (such as paper towels and so 33) _____
Assume that the manufacturing plant processing the sanitation supplies anticipated incur total of \$4,928,000 of manufacturing overhead during the year. Of this amount, \$2,112,000 fixed. Manufacturing overhead is allocated based on machine hours. The plant anticipates running the machines 440,000 hours next year.

Required:

1. Compute the standard variable overhead rate.
2. Compute the fixed overhead rate.
3. Compute the standard total overhead rate.

- 34) McClean supplies restaurants with many sanitation supplies (such as paper towels and so 34) _____
Assume that the manufacturing plant processing the sanitation supplies anticipated incur total of \$800,000 of manufacturing overhead during the year. Of this amount, \$500,000 is f Manufacturing overhead is allocated based on machine hours. The plant anticipates runni the machines 50,000 hours next year.

Required:

1. Compute the standard variable overhead rate.
2. Compute the fixed overhead rate.
3. Compute the standard total overhead rate.

- 35) Good Roast roasts, grinds and bags of organic coffee beans sold at specialty grocery stores 35) _____
Good roast allocates manufacturing overhead based on direct labour hours. Good Roast h projected total overhead for the year to be \$400,000. Of this amount, \$300,000 relates to fix overhead expenses. Good Roast expects to process 100,000 cases of organic coffee this year direct labour standard for each case is 15 minutes.

Required:

1. Compute the standard variable overhead rate.
2. Compute the fixed overhead rate.
3. Compute the standard total overhead rate.

- 36) Good Roast roasts, grinds and bags of organic coffee beans sold at specialty grocery stores 36) _____
Good Roast allocates manufacturing overhead based on direct labour hours. Good Roast has projected total overhead for the year to be \$640,000. Of this amount, \$480,000 relates to fixed overhead expenses. Good Roast expects to process 320,000 cases of organic coffee this year. The direct labour standard for each case is 15 minutes.

Required:

1. Compute the standard variable overhead rate.
2. Compute the fixed overhead rate.
3. Compute the standard total overhead rate.

- 37) Good Roast roasts, grinds and bags of organic coffee beans sold at specialty grocery stores 37) _____
Good Roast allocates manufacturing overhead based on direct labour hours. Good Roast has projected total overhead for the year to be \$960,000. Of this amount, \$640,000 relates to fixed overhead expenses. Good Roast expects to process 160,000 cases of organic coffee this year. The direct labour standard for each case is 30 minutes.

Required:

1. Compute the standard variable overhead rate.
2. Compute the fixed overhead rate.
3. Compute the standard total overhead rate.

- 38) Value Containers currently uses a recycled plastic to make containers for online jewellery and precious coins shipments. 38) _____

The cost and time standards per batch of 1,000 containers are as follows:

- Plastic 250 kilograms at \$5.00 per kg
- Direct labour 2.0 hours at \$20.00 per hour

The variable manufacturing overhead rate is based on total estimated variable manufacturing overhead of \$28,125 and estimated total direct labour hours (DLH) of 18,750. Value Containers allocates its variable manufacturing overhead based on DLH.

The container management team is considering having both the container redesigned and the production process reengineered so that the plastic usage would drop by 20% overall due to generating less scrap in the manufacturing process and using less plastic in each bottle. In addition to decreasing the amount of plastic used in producing the bottles, the additional following benefits would be realized:

- a. Direct labour hours would be reduced by 10% because less scrap would be handled in the production process.
- b. Total estimated variable manufacturing overhead would be reduced by 20% because less scrap would need to be hauled away, less electricity would be used in the production process, and less inventory would need to be stocked.

Required:

1. Calculate the standard cost per batch of 1,000 containers using the current data (before the company makes any changes). Include direct materials, direct labour, and variable manufacturing overhead in the standard cost per unit.
2. Calculate the standard cost per batch of 1,000 containers if the company makes the change to the container design and production process so that less plastic is used. Include direct materials, direct labour, and variable manufacturing overhead in the standard cost per unit.
3. Calculate the cost savings per batch by comparing the standard cost per batch under each scenario (current versus proposed change). Assume that the total cost to implement the change would be \$360,000. How many batches of containers would need to be produced after the change to have the cost savings total equal the cost to make the changes?

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 39) Identify five benefits of standard costs.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 40) A flexible budget is based on the actual number of output units. 40) _____
- 41) Price variances for direct materials and direct labour show how changes in the usage of raw materials and labour affect a company's profits. 41) _____
- 42) A price variance for production inputs is the difference between the actual unit price of an input and the standard unit price of the input, multiplied by the actual input quantity. 42) _____

- 43) An efficiency (quantity) variance for direct materials and direct labour measures how well a company keeps unit prices of material and labour inputs within standards. 43) _____
- 44) If the standard quantity allowed for direct materials and direct labour is less than the actual quantity used, the efficiency variance is unfavourable. 44) _____
- 45) An efficiency variance for production inputs is the difference between the actual quantity of input and the standard quantity of input, multiplied by the actual unit price of input. 45) _____
- 46) The direct materials price variance is (standard price/ divided units) times actual unit output. 46) _____
- 47) A direct materials flexible budget variance can be broken down into a price variance and an efficiency variance. 47) _____
- 48) Raw material, ruined through mistakes during production, will result in a materials price variance. 48) _____
- 49) A flexible-budget variance can be decomposed into an efficiency variance and a rate variance. 49) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 50) If a worker drops the raw material during production and the raw material must be discarded, which variance is directly impacted? 50) _____
 A) Materials price variance B) Materials efficiency variance
 C) Labour price variance D) Labour efficiency variance
- 51) How is the flexible budget for direct materials calculated? 51) _____
 A) The standard quantity of input per unit times the number of units budgeted times the standard price per unit of input
 B) The budgeted quantity of units less the standard quantity of units times the number of output units
 C) The number of units actually made times the standard quantity of input per unit of output times the standard price per unit of input
 D) The standard quantity of input per unit times the number of units actually made
- 52) If the employees who build the product go on strike and temporary workers who are slower and not as skilled are hired, which variance is directly impacted? 52) _____
 A) Materials price variance B) Materials efficiency variance
 C) Labour price variance D) Labour efficiency variance
- 53) A company uses milk in producing its product. If the price of milk doubles, which variance is directly impacted? 53) _____
 A) Materials price variance B) Materials efficiency variance
 C) Labour price variance D) Labour efficiency variance

- 54) The unemployment rate is high in the city in which a company has a factory. The company finds that they are able to pay new employees a lower wage per hour than when the unemployment rate was lower a year ago. Which variance is directly impacted? 54) _____
- A) Materials price variance B) Materials efficiency variance
C) Labour price variance D) Labour efficiency variance
- 55) A company receives an unusually high number of orders in a month. To produce all of the orders within the scheduled dates of delivery, the company pays employees an extra \$10 per hour for every hour of overtime the employees work. Which variance is directly impacted? 55) _____
- A) Materials price variance B) Materials efficiency variance
C) Labour price variance D) Labour efficiency variance
- 56) A company's purchasing department negotiates all of the purchasing contracts for raw materials. Which variance is most useful in assessing the performance of the purchasing department? 56) _____
- A) Materials price variance B) Materials efficiency variance
C) Labour price variance D) Labour efficiency variance
- 57) How is the direct materials price variance calculated? 57) _____
- A) The difference in prices multiplied by the actual quantity of the input
B) The actual quantity of direct materials purchased divided by the per unit price
C) The difference in quantities multiplied by the actual price of the input
D) The actual amount of direct materials purchased divided by the actual quantity
- 58) How is the flexible budget quantity of direct materials calculated? 58) _____
- A) The budgeted quantity of units less the standard quantity of units
B) The number of units actually made times the direct materials price standard
C) The standard quantity of input per unit times the number of units budgeted
D) The standard quantity of input per unit times the number of units actually made
- 59) What does a favourable direct materials efficiency variance indicate? 59) _____
- A) The actual quantity of direct materials used was greater than the standard quantity for budgeted output.
B) The actual quantity of direct materials used was less than the standard quantity for actual output.
C) The actual cost of direct materials was less than the standard cost of direct materials.
D) The standard quantity of direct materials for actual output was less than the actual quantity of direct materials used.

- 60) What does a favourable direct materials price variance indicate? 60) _____
- A) The actual quantity of materials used was less than the standard quantity of materials used for actual production.
 - B) The standard cost of materials purchased was less than the actual cost of materials purchased.
 - C) The standard cost of materials purchased was greater than the actual cost of materials purchased.
 - D) The actual cost of materials purchased was greater than the standard cost of materials purchased.
- 61) The direct materials flexible budget variance can be divided into which of the following two variances? 61) _____
- A) Quantity variance and the efficiency variance
 - B) Price variance and the rate variance
 - C) Price variance and the standard variance
 - D) Price variance and the efficiency variance
- 62) What does an unfavourable direct labour price variance indicate? 62) _____
- A) The actual cost of direct labour per hour was less than the standard cost of direct labour per hour.
 - B) Both actual quantity and actual cost of direct labour hours exceeded standard quantity and standard cost of hours for actual output.
 - C) The actual direct labour cost per hour exceeded the standard direct labour cost per hour for actual quantity of direct labour hours.
 - D) The actual quantity of direct labour hours worked exceeded the standard quantity of hours for actual output.
- 63) An unfavourable direct labour price variance and a favourable direct labour efficiency variance might indicate which of the following? 63) _____
- A) Skilled workers using less actual hours than standard, paid at a higher rate per hour than the standard rate
 - B) Skilled workers using more actual hours than standard, paid at a higher rate per hour than the standard rate
 - C) Unskilled workers using more actual hours than standard, paid at a higher rate per hour than the standard rate
 - D) Unskilled workers using less actual hours than standard, paid a lesser rate per hour than the standard rate

- 64) An unfavourable direct materials efficiency variance and a favourable direct materials price variance might indicate which of the following? 64) _____
- A) Less expensive, inferior materials requiring more than the standard amount were used in production
 - B) More expensive, superior materials requiring more than the standard amount were used in production
 - C) More expensive, superior materials requiring less than the standard amount were used in production
 - D) Less expensive, inferior materials requiring less than the standard amount were used in production
- 65) Which term below is best paired with "measures how well the business keeps unit prices of direct materials and direct labour inputs within standards"? 65) _____
- A) Production volume variance
 - B) Overhead flexible budget variance
 - C) Efficiency variance
 - D) Price variance
- 66) Which term below is best paired with "measures whether the quantity of direct materials or direct labour used to make the actual number of outputs is within the standard allowed for that number of outputs"? 66) _____
- A) Production volume variance
 - B) Overhead flexible budget variance
 - C) Efficiency variance
 - D) Price variance

Grayson Industries has collected the following data for one of its products:

Direct materials standard (5 kilograms per unit @ \$0.50/kg.)	\$2.50 per finished good
Direct materials flexible budget variance	\$10,000 unfavourable
Actual direct materials purchased and used	100,000 kilograms
Actual finished goods produced	24,000 units

- 67) What is the total actual cost of the direct materials used at Grayson Industries? 67) _____
- A) \$10,000
 - B) \$70,000
 - C) \$50,000
 - D) \$60,000
- 68) What is the actual cost of the direct materials used per kilogram at Grayson Industries? 68) _____
- A) \$0.70
 - B) \$2.92
 - C) \$0.50
 - D) \$3.00
- 69) How much is the direct materials efficiency variance at Grayson Industries? 69) _____
- A) \$12,000 favourable
 - B) \$10,000 favourable
 - C) \$12,000 unfavourable
 - D) \$10,000 unfavourable
- 70) How much is the direct materials price variance at Grayson Industries? 70) _____
- A) \$10,000 unfavourable
 - B) \$20,000 unfavourable
 - C) \$20,000 favourable
 - D) \$10,000 favourable

- 71) Thomas Corporation produces stopwatches. According to company standards, it should take 1 hour of direct labour to produce a stopwatch. Thomas' standard labour cost is \$18 per hour. During June, Thomas produced 5,000 stopwatches and used 5,150 hours of direct labour at a total cost of \$102,500. What is Thomas' direct labour price variance for June? 71) _____
- A) \$9,515 unfavourable B) \$9,800 unfavourable
C) \$9,515 favourable D) \$9,800 favourable

- 72) The actual cost of direct materials is \$51.30 per kilogram. The standard cost per kilogram is \$55.00. During the current period, 7,240 kilograms were purchased and used in production. The standard quantity for actual units produced is 7,000 kilograms. How much is the direct materials price variance? 72) _____
- A) \$26,788 favourable B) \$25,900 favourable
C) \$25,900 unfavourable D) \$26,788 unfavourable

The following information describes Benji's Security Services usage of direct labour in a recent period:

Actual direct labour hours used	32,500
Actual rate per hour	\$20.00
Standard rate per hour	\$18.50
Standard hours for units produced	32,000

- 73) How much is the direct labour efficiency variance at Benji's Security Services? 73) _____
- A) \$10,000 favourable B) \$9,250 unfavourable
C) \$9,250 favourable D) \$10,000 unfavourable

- 74) The following information describes a company's usage of direct labour in a recent period: 74) _____

Actual direct labour hours used	32,500
Actual rate per hour	\$20.00
Standard rate per hour	\$18.50
Standard hours for units produced	32,000

How much is the direct labour price variance?

- A) \$48,750 unfavourable B) \$64,000 favourable
C) \$64,000 unfavourable D) \$48,750 favourable
- 75) The actual cost of direct materials is \$11.70 per kilogram. The standard cost per kilogram is \$11.50. During the current period, 8,200 kilograms of direct materials were used in production and 8,300 kilograms were purchased. The standard quantity of direct materials for actual units produced is 8,100 kilograms. How much is the direct materials efficiency variance? 75) _____
- A) \$1,170 unfavourable B) \$1,170 favourable
C) \$1,150 unfavourable D) \$1,150 favourable

At Sandra's Sewing Company the actual cost of direct labour per hour is \$25.20 and the standard cost of direct labour per hour is \$24.00. One and a half budgeted direct labour hours are allowed per finished unit. During the current period, 1,400 finished goods were produced using 2,050 direct labour hours.

- 76) How much is the direct labour price variance at Sandra's Sewing Company? 76) _____
 A) \$600 unfavourable B) \$600 favourable
 C) \$2,460 unfavourable D) \$2,460 favourable
- 77) How much is the direct labour efficiency variance at Sandra's Sewing Company? 77) _____
 A) \$1,200 favourable B) \$1,260 favourable
 C) \$1,200 unfavourable D) \$1,260 unfavourable
- 78) The actual cost of direct labour per hour is \$25.00. Two standard direct labour hours are allowed 78) _____
 per finished good. During the current period, 2,000 finished goods were produced using 3,800
 direct labour hours. The direct labour efficiency variance is \$5,040, favourable. Calculate the
 standard direct labour rate per hour.
 A) \$123.20 B) \$25.00 C) \$80.00 D) \$25.20
- 79) The standard cost of direct labour per hour is \$20.00. Two standard direct labour hours are 79) _____
 allowed per finished good. During the current period, 512 finished goods were produced using
 1,000 direct labour hours. The direct labour price variance is \$200, unfavourable. Calculate the
 actual cost of direct labour per hour.
 A) \$24.00 B) \$20.20 C) \$2.40 D) \$20.00
- 80) Cateye Corporation Company budgeted 600 kilograms of direct materials costing \$27.00 per 80) _____
 kilogram to make 6,000 units of product. The company actually used 585 kilograms of direct
 materials costing \$28.00 per kilogram to make the 6,000 units. What is the direct materials
 efficiency variance?
 A) \$405 favourable B) \$420 unfavourable
 C) \$420 favourable D) \$405 unfavourable
- 81) Custom Tile Works budgeted 2.5 hours of direct labour per unit at \$22.20 per hour to produce 520 81) _____
 hand-painted mosaic tiles. The 520 tiles were completed using 1,400 hours of direct labour at
 \$20.50 per hour. What is the direct labour price variance?
 A) \$2,380 unfavourable B) \$11,544 favourable
 C) \$2,380 favourable D) \$11,544 unfavourable
- 82) The Braddock Company budgeted 5,400 kilograms of direct materials to make 2,700 units of 82) _____
 product. The company actually used 5,600 kilograms of direct materials to make the 2,700 units.
 The direct materials efficiency variance is \$1,400 unfavourable. What is the standard cost per
 kilogram of direct materials?
 A) \$14.00 B) \$7.00 C) \$3.50 D) \$0.50

Gutierrez Company budgeted 10,000 kilograms of direct materials costing \$21.50 per kilogram to make 5,000 units of product. The company actually purchased and used 10,200 kilograms of direct materials costing \$24.00 per kilogram to make the 5,000 units.

- 83) What is the direct materials price variance at the Gutierrez Company? 83) _____
 A) \$25,500 unfavourable B) \$25,500 favourable
 C) \$25,000 favourable D) \$25,000 unfavourable
- 84) What is the direct materials efficiency variance at the Gutierrez Company? 84) _____
 A) \$4,300 favourable B) \$4,800 unfavourable
 C) \$4,800 favourable D) \$4,300 unfavourable

Green Garden Supply budgeted three hours of direct labour per unit at \$20.00 per hour to produce 500 units of product. The 500 units were completed using 1,600 hours of direct labour at \$20.50 per hour.

- 85) What is the direct labour efficiency variance at Green Garden Supply? 85) _____
 A) \$2,050 favourable B) \$2,050 unfavourable
 C) \$2,000 unfavourable D) \$2,000 favourable
- 86) What is the direct labour price variance at Green Garden Supply? 86) _____
 A) \$750 unfavourable B) \$800 unfavourable
 C) \$800 favourable D) \$750 favourable

Sunset Beverages gathered the following information for Job #341:

	Standard Total Cost	Actual Total Cost
Direct materials:		
Standard: 2,000 pints at \$4/pint	\$8,000	
Actual purchased and used: 2,150 pints at \$4.50/pint		\$9,675
Direct labour:		
Standard: 500 hours at \$17.50/hr.	8,750	
Actual: 480 hours at \$17.25/hr.		8,280

- 87) What is the direct materials price variance at Sunset Beverages? 87) _____
 A) \$1,075 unfavourable B) \$1,000 unfavourable
 C) \$1,000 favourable D) \$1,075 favourable
- 88) What is the direct materials efficiency variance at Sunset Beverages? 88) _____
 A) \$600 favourable B) \$600 unfavourable
 C) \$675 unfavourable D) \$675 favourable
- 89) What is the direct labour price variance at Sunset Beverages? 89) _____
 A) \$120 unfavourable B) \$120 favourable
 C) \$470 favourable D) \$470 unfavourable

- 90) What is the direct labour efficiency variance at Sunset Beverages?
- A) \$350 favourable B) \$350 unfavourable
C) \$470 favourable D) \$470 unfavourable

90) _____

Dazzle Toy Company gathered the following actual results for the current month:

Actual production	4,000 units
Direct materials purchased and used (8,500 kgs.)	\$34,850
Direct labour cost (5,800 hours)	\$130,500
Manufacturing overhead costs incurred	\$39,000

Budgeted production and standard costs were:

Budgeted production	3,500 units
Direct materials	2 kgs./unit at \$4.25/kg.
Direct labour	1.5 hrs./unit at \$22.00/hr.
Variable manufacturing overhead	\$4.50 per unit
Fixed manufacturing overhead	\$21,000

- 91) What is the direct materials price variance at Dazzle Toy Company?
- A) \$5,100 unfavourable B) \$5,100 favourable
C) \$1,275 favourable D) \$1,275 unfavourable
- 92) What is the direct materials efficiency variance at Dazzle Toy Company?
- A) \$6,375 unfavourable B) \$6,375 favourable
C) \$2,125 favourable D) \$2,125 unfavourable
- 93) What is the direct labour price variance at Dazzle Toy Company?
- A) \$20,000 unfavourable B) \$20,000 favourable
C) \$2,900 favourable D) \$2,900 unfavourable
- 94) What is the direct labour efficiency variance at Dazzle Toy Company?
- A) \$4,400 favourable B) \$4,400 unfavourable
C) \$15,000 unfavourable D) \$15,000 favourable

91) _____

92) _____

93) _____

94) _____

YumYum Corporation makes brownies and fudge. YumYum Corporation gathered the following information for the current regarding its use of sugar (sugar is a direct material for brownies and powdered sugar is a direct material for fudge):

	Sugar (Direct Materials) Brownies	Powered Sugar (Direct Materials) Fudge
Standard quantity of sugar per batch	3 kg	4 kg
Standard price per kilogram of sugar	\$2.00/kg	?
Actual quantity of sugar purchased and used per batch (kilograms)	?	3 kg
Actual price paid for sugar	\$2.50/kg	\$5.00/kg
Price variance	\$200 U	\$450 F
Efficiency variance	\$400 F	?
Flexible budget variance	?	\$2,100 F
Number of batches produced	200	300

- 95) What is the direct materials flexible budget variance for the Sugar in Brownies? 95) _____
 A) \$200 unfavourable B) \$200 favourable
 C) \$600 unfavourable D) \$600 favourable
- 96) What is the actual direct material quantity used per batch for Brownies at YumYum Corporation? 96) _____
 A) 2.0 kg B) 0.5 kg C) 3.0 kg D) 4.0 kg
- 97) What is the standard direct material price per kilogram for the Powdered Sugar in Fudge? 97) _____
 A) \$5.50/kg B) \$7.00/kg C) \$8.50/kg D) \$5.00/kg
- 98) What is the direct material efficiency variance for Powered Sugar in Fudge? 98) _____
 A) \$1,650 favourable B) \$1,650 unfavourable
 C) \$2,550 favourable D) \$2,550 unfavourable
- 99) Wilbeth Corporation budgeted to manufacture 2,000 soccer balls in March. Actual output for March was 1,900 balls with total direct materials cost of \$2,200 and total direct labour cost of \$6,500. The direct labour standard is 10 minutes per ball at a direct labour rate of \$18 per hour. The direct material standard is 0.5 kilogram of direct materials per ball at a cost of \$12 per kilogram. Actual direct labour hours were 325. A variance analysis for March would show a direct labour rate variance of 99) _____
 A) \$650 favourable. B) \$3,800 favourable.
 C) \$3,800 unfavourable. D) \$650 unfavourable.

- 100) _____

What is A.K. London Corporation's direct labour quantity (efficiency) variance?

- 101)

Hewlitt Company uses a standard cost system. What is the materials price variance?

- 102)

- 103)

- 17

- 104) Outdoor Living Corporation manufactures sun umbrellas that use a canvas as the main raw material. Data related to the sun umbrellas for May follows:

104) _____

Standard quantity per unit of output (metres)	3.5
Standard price per metre	\$11.90
Actual materials purchased and used (metres)	9,000
Actual cost of materials purchased	\$89,250
Actual outputs in units	2,500

What is the materials quantity variance for canvas for May?

- A) \$2,975 favourable B) \$2,479 unfavourable
C) \$2,479 favourable D) \$2,975 unfavourable

- 105) Seraphine Corporation manufactures rhinestone-studded jewelry boxes. The following materials standards have been established for the rhinestones used to decorate the jewelry boxes.

105) _____

Standard quantity per jewelry box (grams)	4.0
Standard price per gram of rhinestones	\$2.50

The following data relates to the production of the jewelry boxes during June:

Actual rhinestones purchased and used (grams)	1,800
Actual cost of rhinestones purchased	\$4,410
Actual number of jewelry boxes produced	450

What is the materials price variance for rhinestones in June?

- A) \$90 favourable B) \$500 favourable
C) \$500 unfavourable D) \$90 unfavourable

- 106) A computer chip is purchased to be used in the manufacture of a radio. The standard price of the computer chip is \$50.00. During the month of January, 2,240 computer chips were purchased and used. The materials price variance was \$5,600 unfavourable. The standard number of computer chips allowed for the actual number of radios manufactured during the period was 3,100 chips. What was the actual purchase price of each computer chip?

106) _____

- A) \$50.18 per computer chip B) \$47.50 per computer chip
C) \$52.50 per computer chip D) \$49.82 per computer chip

- 107) Vonnie's Bakery manufactures a specialty cake that is very popular with the local residents. For May, Vonnie's Bakery budgeted 800 direct labour hours to produce 400 cakes. In May, Vonnie's Bakery actually produced 450 cakes and actually used 900 direct labour hours. The standard hours allowed during May would have been closest to

107) _____

- A) 400. B) 450 C) 800. D) 900.

- 108) Irvin Racquet Company produces tennis racquets. The direct labour standard for each racquet is 0.50 hours at a cost of \$22.00 per direct labour hour. During the month of April, Irvin Racquet Company used 1,200 direct labour hours to produce 2,350 racquets. Total direct labour cost for April was \$26,100. What is the labour price (rate) variance for Irvin Racquet Company for April? 108) _____
- A) \$250 unfavourable B) \$250 favourable
C) \$300 unfavourable D) \$300 favourable

- 109) Lovell Nails performs manicures in their salon. Labour standards for each manicure are as follows: 109) _____

Standard direct labour hours per manicure	1.50
Standard direct labour rate	\$15.00

The following data relates to the manicures performed during the month of December:

Actual hours worked	170
Actual total labour cost	\$2,635
Actual number of manicures performed	120

What is the labour quantity (efficiency) variance for the month of December?

- A) \$150 favourable B) \$150 unfavourable
C) \$139 favourable D) \$139 unfavourable
- 110) Dudley's Automotive installs mufflers in cars. Each muffler has a standard for installation time of 0.25 direct labour hours. The standard direct labour hour rate is \$12.50 per hour. Data relating to muffler installations for the month of July follow: 110) _____

Actual number of mufflers installed	2,100
Actual direct labour hours worked	500
Actual total direct labour cost	\$5,600

What is the labour price (rate) variance for July?

- A) \$2,730 favourable B) \$2,730 unfavourable
C) \$650 favourable D) \$650 unfavourable

- 111) Johnson Faucet Company manufactures faucets. The following data relate to the standards for direct labour:

111) _____

Standard direct labour hours per faucet	2.0
Standard direct labour rate per hour	\$18.50

Johnson Faucet Company had the following actual results for August:

Actual direct labour hours	3,800
Actual total direct labour cost	\$52,750
Actual number of faucets produced	1,850

What is the direct labour efficiency variance for August?

- A) \$1,388 unfavourable B) \$1,850 unfavourable
C) \$1,388 favourable D) \$1,850 favourable

- 112) Nautical Chairs Company manufactures boat chairs. The following data relate to the standards for direct labour:

112) _____

Standard direct labour hours per chair	3.0
Standard direct labour rate per hour	\$26.00

Nautical Chairs Company had the following actual results for September:

Actual direct labour hours	1,900
Actual total direct labour cost	\$50,350
Actual number of chairs produced	650

What is the direct labour efficiency variance for September?

- A) \$1,300 favourable B) \$1,300 unfavourable
C) \$800 unfavourable D) \$800 favourable

Paulson Corporation manufactures tablecloths, which is its only product. The standards for tablecloths are as follows:

Standard direct materials cost per metre	\$11
Standard direct materials quantity per tablecloth (metres)	2
Standard direct labour cost per hour	\$15
Standard direct labour hours per tablecloth	0.5

During the month of September, the company produced 1,000 tablecloths. Related production data for the month follows:

Actual metres of direct material purchased and used	2,200
Actual direct materials total cost	\$23,430
Actual direct labour hours	450
Actual direct labour cost incurred	\$7,020

- 113) What is Paulson Corporation's direct materials price variance for the month? 113) _____
 A) \$770 unfavourable B) \$1,430 favourable
 C) \$1,430 unfavourable D) \$770 favourable
- 114) What is Paulson Corporation's direct materials efficiency variance for the month? 114) _____
 A) \$1,300 unfavourable B) \$2,200 unfavourable
 C) \$2,200 favourable D) \$1,300 favourable
- 115) What is Paulson Corporation's direct labour price variance for the month? 115) _____
 A) \$270 unfavourable B) \$480 favourable
 C) \$480 unfavourable D) \$270 favourable
- 116) What is Paulson Corporation's direct labour efficiency variance for the month? 116) _____
 A) \$750 unfavourable B) \$650 unfavourable
 C) \$750 favourable D) \$650 favourable

Shyson Corporation manufactures cargo containers, which is its only product. The standards for cargo containers are as follows:

Standard tonnes of direct material (steel) per container	3
Standard cost per tonne of steel	\$15.00
Standard labour hours per container	2.5
Standard labour cost per direct labour hour	\$20.00

During the month of September, the company produced 1,000 cargo containers. Related production data for the month follows:

Actual materials purchased and used (tonnes)	3,100
Actual direct materials total cost	\$51,150
Actual direct labour hours	2,700
Actual direct labour total cost	\$51,550

- 117) What is Shyson Corporation's direct materials price variance for the month? 117) _____
 A) \$4,650 unfavourable B) \$1,500 favourable
 C) \$4,650 favourable D) \$1,500 unfavourable

- 118) What is Shyson Corporation's direct materials efficiency variance for the month? 118) _____
 A) \$4,650 unfavourable B) \$4,650 favourable
 C) \$1,500 unfavourable D) \$1,500 favourable
- 119) What is Shyson Corporation's direct labour price variance for the month? 119) _____
 A) \$2,722 favourable B) \$2,722 unfavourable
 C) \$2,450 favourable D) \$2,450 unfavourable
- 120) What is Shyson Corporation's direct labour efficiency variance for the month? 120) _____
 A) \$4,000 favourable B) \$3,815 unfavourable
 C) \$4,000 unfavourable D) \$3,815 favourable

Use the information below to answer the following question(s).

The following data for a pottery company pertain to the production of 2,000 clay pots during July.

Direct Materials (all materials purchased were used):

Standard cost: \$6.00 per kilogram of clay

Total actual cost: \$11,200

Standard cost allowed for units produced was \$12,000

Materials efficiency variance was \$240 unfavourable

Direct Manufacturing Labour:

Standard cost is 2 pots per hour at \$24.00 per hour

Actual cost per hour was \$24.50

Actual labour was 972 hours

- 121) What is the standard direct material amount per pot? 121) _____
 A) 1.88 kilograms B) 2.12 kilograms C) 1.00 kilogram D) 3.00 kilograms
- 122) What is the direct manufacturing labour efficiency variance? 122) _____
 A) \$500 unfavourable B) \$672 unfavourable
 C) \$672 favourable D) \$500 favourable
- 123) What is the direct manufacturing labour rate variance? 123) _____
 A) \$486 favourable B) \$672 unfavourable
 C) \$672 favourable D) \$486 unfavourable
- 124) What is the direct materials rate variance for the clay pots? 124) _____
 A) \$800 favourable B) \$1,040 favourable
 C) \$560 unfavourable D) \$560 favourable

Use the information below to answer the following question(s).

Tractor Corporation produces toy tractors. The company uses the following direct cost categories:

Category	Standard Inputs for 1 output	Std. Cost per input
Direct Materials	4.00	\$12.50
Direct Labour	1.40	19.50
Direct Marketing	0.54	30

Actual performance for the company is shown below:

Actual output: 5,000 units

Direct Materials:

Materials costs	\$229,500
Input purchased and used	18,000
Actual price per input	\$12.75

Direct Manufacturing Labour:

Labour costs	\$150,000
Labour-hours of input	7,500
Actual price per hour	\$20.00

Direct Marketing Labour:

Labour costs	\$70,000
Labour-hours of input	2,500
Actual price per hour	\$8.00

- 125) What is the combined total of the flexible budget variances? 125) _____
- A) \$49,500 unfavourable B) \$49,500 favourable
- C) \$18,000 favourable D) \$18,000 unfavourable
- 126) What is the rate variance of the direct materials? 126) _____
- A) \$4,500 favourable B) \$11,500 favourable
- C) \$11,500 unfavourable D) \$4,500 unfavourable
- 127) What is the efficiency variance for direct materials? 127) _____
- A) \$25,000 favourable B) \$36,000 favourable
- C) \$25,000 unfavourable D) \$36,000 unfavourable
- 128) What is the rate variance of the direct manufacturing labour, and the direct marketing labour, respectively? 128) _____
- A) \$3,750 unfavourable; \$5,000 favourable
- B) \$3,750 favourable; \$5,000 unfavourable
- C) \$4,750 favourable; \$12,500 favourable
- D) \$4,750 unfavourable; \$12,500 unfavourable

- 129) What are the efficiency variances for direct manufacturing labour and direct marketing labour, respectively? 129) _____
- A) \$9,750 favourable; \$6,00 unfavourable
 B) \$9,750 unfavourable; \$6,000 favourable
 C) \$25,000 unfavourable; \$18,400 unfavourable
 D) \$25,000 favourable; \$18,400 favourable

Use the information below to answer the following question(s).

Robb Industries Inc. (RII), developed standard costs for direct material and direct labour. In 2016, RII estimated the following standard costs for one of their major products, the 10-litre plastic container.

	Budgeted quantity	Budgeted price
Direct materials	0.10 kilograms	\$30 per kilogram
Direct labour	0.05 hours	\$15 per hour

During June 2017, RII produced and sold 5,000 containers using 490 kilograms of direct materials at an average actual cost per kilogram of \$32 and 250 direct manufacturing labour-hours at an average actual wage of \$15.25 per hour.

- 130) June's direct material flexible-budget variance is 130) _____
- A) \$980 favourable. B) \$680 favourable.
 C) \$680 unfavourable. D) \$980 unfavourable.
- 131) June's direct material rate variance is 131) _____
- A) \$980 favourable. B) \$980 unfavourable.
 C) \$1,000 favourable. D) \$1,000 unfavourable.
- 132) June's direct material efficiency variance is 132) _____
- A) \$300 unfavourable. B) \$320 unfavourable.
 C) \$300 favourable. D) \$320 favourable.
- 133) June's direct manufacturing labour rate variance is 133) _____
- A) \$62.50 favourable. B) \$128.00 unfavourable.
 C) \$128.00 favourable. D) \$62.50 unfavourable.
- 134) June's direct manufacturing labour efficiency variance is 134) _____
- A) \$62.50 favourable. B) \$62.50 unfavourable.
 C) \$128.00 favourable. D) neither favourable nor unfavourable.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

135) Cassandra Designs makes chair cushions. The standard direct materials quantity is 1 kilogram per cushion at a cost of \$2.50 per kilogram. The actual results for the production of 20,000 cushions was the purchase and use of 1.25 kilograms per cushion, at a cost of \$2.40 per kilogram. Calculate the direct materials price variance and the direct materials efficiency variance. 135) _____

136) Red River Corporation reports the following standards for direct labour for the year: 136) _____

Standard cost per hour	\$18.50
Standard quantity per finished good	2.5 hours

During the year, 180,000 finished goods were produced. The direct labour efficiency variance was \$38,850 favourable. The direct labour flexible budget variance was \$700 favourable.

Calculate the following items regarding direct labour for Red River Corporation for the year:

1. Direct labour price variance
2. Standard quantity of direct labour for actual production
3. Actual hours of direct labour incurred for actual production

137) Copper Company reports the following standards for direct materials for the year: 137) _____

Standard cost per kilogram	\$2.50
Standard amount per finished good	6 kilograms

During the year, 420,000 finished goods were produced. The direct materials price variance was \$13,600 unfavourable. The direct materials flexible budget variance was \$1,200 favourable. The quantity of direct materials purchased was the same as the amount used.

Calculate the following items regarding direct materials for Douglas Corporation for the year:

1. Direct materials efficiency variance
2. Standard quantity of direct materials for actual production
3. Actual kilograms of direct materials used for actual production

138) The Payne Corporation's actual output for a period was assigned the standard labour cost of \$25,000. If the company had an unfavourable direct labour price variance of \$1,800 and a favourable direct labour efficiency variance of \$750, what was the total actual cost of direct labour incurred during the period? 138) _____

139) Kentucky Industries' actual direct labour cost was \$52,000 during the current period. Kentucky reported an unfavourable direct labour price variance of \$1,200 and a favourable direct labour efficiency variance of \$3,600. What was the standard direct labour cost for actual output during the period? 139) _____

140) Montrose Processing Corporation has the following information regarding direct materials:

Actual kilograms of direct materials purchased and used	40,000
Standard quantity of direct materials good	2 kilograms per finished
Actual production	21,000 finished goods
Direct materials efficiency variance	\$12,000 F
Direct materials price variance	\$8,000 U

Compute Jeremy's standard price per kilogram and actual price per kilogram of direct materials.

140) _____

141) Switzer Chocolate Company produces fudge in large batches. One batch of fudge has the following standard costs and amounts:

Standard quantity of sugar (kilograms)	100
Standard cost per kilogram of sugar	\$1.90
Standard direct labour hours per batch of fudge	2.0
Standard direct labour cost per hour	\$18.00

Switzer Chocolate Company produced 400 batches of fudge in the most recent month. Actual costs and usage levels were as follows:

Actual kilograms of sugar purchased and used per batch of fudge	102
Actual cost per kilogram of sugar	\$2.10
Actual direct labour hours per batch of fudge	1.8
Actual direct labour cost per hour	\$17.50

Required:

1. Calculate the material price variance.
2. Calculate the material efficiency variance.
3. Calculate the labour price variance.
4. Calculate the labour efficiency variance.

141) _____

- 142) Anderson Company manufactures a single product. The direct materials standard calls for 3 kilograms of direct material per unit. The standard for direct material cost per kilogram is \$15.50. A computer error has wiped out the records for the direct labour standards but the following information is found for the month of October:

142) _____

Number of units produced	700
Cost of actual direct materials purchased and used	\$33,000.00
Actual direct labour hours used	1,450
Actual direct labour cost incurred	\$21,025.00
Materials price variance- favourable	\$1,100.00
Labour efficiency variance- unfavourable	\$712.50
Total labour variance-unfavourable	\$1,075.00

Required:

1. Calculate the number of kilograms of direct materials purchased and used during October.
2. Calculate the materials efficiency (quantity) variance.
3. Calculate the standard direct labour rate per hour.
4. Calculate the standard direct labour hours allowed for October's production.

- 143) Littrell Company produces chairs and has determined the following direct cost categories budgeted amounts: 143) _____

<u>Category</u>	<u>Standard Inputs for 1 output</u>	<u>Standard Cost per input</u>
Direct Materials	1.00	\$7.50
Direct Labour	0.30	9.00
Direct Marketing	0.50	3.00

Actual performance for the company is shown below:

Actual output: (in units)	<u>4,000</u>
Direct Materials:	
Materials costs	\$30,225
Input purchased and used	3,900
Actual price per input	\$7.75
Direct Manufacturing Labour:	
Labour costs	\$11,470
Labour-hours of input	1,240
Actual price per hour	\$9.25
Direct Marketing Labour:	
Labour costs	\$5,880
Labour-hours of input	2,100
Actual price per hour	\$2.80

Required:

- What is the combined total of the flexible-budget variances?
- What is the rate variance of the direct materials?
- What is the rate variance of the direct manufacturing labour and the direct marketing labour, respectively?
- What is the efficiency variance for direct materials?
- What are the efficiency variances for direct manufacturing labour and direct marketing labour, respectively?

- 144) Mittrell Company produces chairs and has determined the following direct cost categories and budgeted amounts: 144) _____

Category	Standard Inputs for 1 output	Standard Cost per input
Direct Materials	1.00	\$9.50
Direct Labour	0.60	12.00
Direct Marketing	0.20	2.50

Actual performance for the company is shown below:

Actual output: (in units)	<u>5,000</u>
Direct Materials:	
Materials costs	\$41,625
Input purchased and used	4,500
Actual price per input	\$9.25
Direct Manufacturing Labour:	
Labour costs	\$35,125
Labour-hours of input	2,810
Actual price per hour	\$12.50
Direct Marketing Labour:	
Labour costs	\$3,080
Labour-hours of input	1,100
Actual price per hour	\$2.80

Required:

- What is the combined total of the flexible-budget variances?
- What is the rate variance of the direct materials?
- What is the rate variance of the direct manufacturing labour and the direct marketing labour, respectively?
- What is the efficiency variance for direct materials?
- What are the efficiency variances for direct manufacturing labour and direct marketing labour, respectively?

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 145) Manufacturing overhead cost allocated to production equals the standard predetermined manufacturing overhead cost rate times the actual quantity of the allocation base allowed for the standard number of outputs. 145) _____
- 146) The production volume variance is favourable whenever actual output is greater than expected output. 146) _____
- 147) The variable overhead flexible budget variance is the difference between the actual overhead costs and the flexible budget overhead costs for budgeted production. 147) _____
- 148) The production volume variance is the difference between the flexible budget overhead for actual production output and the standard overhead costs allocated to production. 148) _____

- 149) The total variable manufacturing overhead variance is composed of the spending variance and the efficiency variance. 149) _____
- 150) The variable overhead efficiency variance tells management how efficiently manufacturing overhead was used during the period. 150) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 151) What could cause a production volume variance for fixed expenses? 151) _____
- A) The union calls for a strike of factory workers and temporary workers are hired to fill in for the striking employees.
 - B) The number of units actually sold is different than the units upon which the static budget was based.
 - C) Insurance costs on the factory rise unexpectedly during the year due to a crisis in the insurance industry.
 - D) The lease on the manufacturing facility is renegotiated and the lease payments increase during the year.
- 152) Which term below is best paired with "shows how well management has controlled overhead costs"? 152) _____
- A) Production volume variance
 - B) Overhead flexible budget variance
 - C) Efficiency variance
 - D) Price variance
- 153) The difference between total actual variable overhead costs and the flexible budget amount for variable overhead costs for actual production is referred to as 153) _____
- A) the variable overhead spending variance.
 - B) the variable overhead flexible budget variance.
 - C) the variable overhead efficiency variance.
 - D) the production volume variance.
- 154) If actual units produced exceed the budgeted units to be produced, which of the following statements would be TRUE? 154) _____
- A) Fixed overhead budget variance is expected to be unfavourable.
 - B) Fixed overhead budget variance is expected to be favourable.
 - C) Production volume variance is expected to be favourable.
 - D) Production volume variance is expected to be unfavourable.

155) Strait Corporation uses the following standard costs for a single unit of product:

155) _____

Direct labour (5 hours @ \$20/hour)	\$100
Variable overhead (4 hours @ \$7/hour)	\$28

Actual data for the month showed variable overhead costs of \$524,000 for 20,000 units produced. is the difference between actual variable overhead costs and standard variable overhead costs allocated to products?

- A) \$38,000 favourable B) \$36,000 unfavourable
C) \$36,000 favourable D) \$38,000 unfavourable

156) Canterbury Company uses the following variable overhead standard costs for a single unit of product: 8 hours at \$12 per hour. Actual data for the month showed variable overhead costs of \$138,500 for 1,400 units produced. What is the difference between actual overhead costs and standard overhead costs allocated to products?

156) _____

- A) \$4,100 favourable B) \$4,100 unfavourable
C) \$121,700 favourable D) \$121,700 unfavourable

157) Tuscany Foods has the following information about its standards and production activity for January:

157) _____

Actual manufacturing overhead cost incurred, \$48,500

Standard manufacturing overhead:

Variable manufacturing overhead cost @ \$4.40 per unit produced

Fixed manufacturing overhead cost @ \$4 per unit produced (\$48,000/12,000 budgeted units)

Actual units produced, 9,500

Assume the allocation base for fixed overhead costs is the number of units to be produced.

How much are the standard overhead costs allocated to actual production?

- A) \$48,500 B) \$100,800 C) \$79,800 D) \$52,800

158) Royal Industries has the following information about its standards and production activity for January:

158) _____

Actual manufacturing overhead cost incurred, \$86,500

Variable manufacturing overhead cost @ \$2.50 per unit produced

Fixed manufacturing overhead cost @ \$2 per unit produced (\$24,000/12,000 budgeted units)

Actual units produced, 4,500

Assume the allocation base for fixed overhead costs is the number of units to be produced.

How much are the standard overhead costs allocated to actual production?

- A) \$20,250 B) \$30,000 C) \$86,500 D) \$54,000

- 159) The standard variable overhead cost rate for the Croskey Company is \$12 per unit. Budgeted fixed overhead cost is \$50,000. The Croskey Company budgeted 4,000 units for the current period and actually produced 3,860 finished units. What is the production volume variance, assuming that the allocation base for fixed overhead costs is the number of units expected to be produced?
- A) \$1,7500 unfavourable B) \$2,100 unfavourable
C) \$1,750 favourable D) \$2,100 favourable

159) _____

- 160) The standard variable overhead cost rate for Walter Manufacturing is \$23 per unit. Budgeted fixed overhead cost is \$52,000. Walter Manufacturing budgeted 4,000 units for the current period and actually produced 4,100 finished units. What is the production volume variance, assuming that the allocation base for fixed overhead costs is the number of units expected to be produced?
- A) \$1,300 unfavourable B) \$2,300 favourable
C) \$1,300 favourable D) \$2,300 unfavourable

160) _____

Bolt Industries gathered the following information for the month ended March 31:

The static budget volume is 9,000 units:

Overhead flexible budget:

Number of units	8,000	9,000	10,000
Standard machine hours	12,000	13,500	15,000
Budgeted overhead costs:			
Variable	\$24,000	\$27,000	\$30,000
Fixed	\$33,750	\$33,750	\$33,750

Actual production was 10,000 units. Actual overhead costs were \$26,000 for variable costs and \$35,000 for fixed costs. Actual hours worked were 14,100 hours.

- 161) What is the production volume variance at Bolt Industries? (Assume the allocation base for fixed overhead costs is machine hours.)
- A) \$3,750 favourable B) \$2,350 unfavourable
C) \$3,750 unfavourable D) \$2,350 favourable

161) _____

- 162) What is the standard variable overhead rate per machine hour at Bolt Industries?
- A) \$2.50 B) \$1.00 C) \$2.00 D) \$3.75

162) _____

Answer the following question(s) using the information below.

Kellar Corporation manufactured 1,500 chairs during June. The following variable overhead data pertain to June:

Budgeted variable overhead cost per unit	\$12.00
Actual variable manufacturing overhead cost	\$16,800
Flexible-budget amount for variable manufacturing overhead	\$18,000
Variable manufacturing overhead efficiency variance	\$360 unfavourable

163) What is the variable overhead flexible-budget variance? 163) _____

- A) \$360 unfavourable B) \$1,560 unfavourable
C) \$1,200 favourable D) \$840 favourable

164) What is the variable overhead rate variance? 164) _____

- A) \$1,560 unfavourable B) \$1,560 favourable
C) \$1,200 unfavourable D) \$1,200 favourable

Use the information below to answer the following question(s).

Willis Corporation manufactures industrial-sized gas furnaces and uses budgeted machine-hours to allocate variable manufacturing overhead. The following information pertains to the company's manufacturing overhead data:

Budgeted output	30,000 units
Budgeted machine hours	10,000 hours
Budgeted variable manufacturing overhead costs for 30,000 units	\$322,500
Actual output produced	44,000 units
Actual machine hours used	14,400 hours
Actual variable manufacturing overhead costs	\$484,000

165) What is the flexible budget amount for variable manufacturing overhead? 165) _____

- A) \$322,500 B) \$464,400 C) \$473,000 D) \$484,000

166) What is the flexible budget variance for variable manufacturing overhead? 166) _____

- A) \$19,600 unfavourable B) \$11,000 unfavourable
C) \$161,500 unfavourable D) \$54,000 unfavourable

167) What is the variable overhead spending variance? 167) _____

- A) \$19,600 unfavourable B) \$13,611 favourable
C) \$19,600 favourable D) \$13,611 unfavourable

168) What is the variable overhead efficiency variance? 168) _____

- A) \$141,900 favourable B) \$8,600 unfavourable
C) \$141,900 unfavourable D) \$8,600 favourable

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 169) Cirilla's Weathervane Company manufactures weathervanes. The current year operating budget is based on the production of 10,000 weathervanes with 1.25 machine-hour allowed per weathervane. Variable manufacturing overhead is anticipated to be \$300,000. 169) _____

Actual production was 11,000 weathervanes using 12,100 machine-hours. Actual variable costs were \$23.75 per machine-hour.

Required:

Calculate the variable overhead spending and the efficiency variances.

- 170) Trilite Windows manufactures windows. The current year operating budget is based on production of 56,000 windows with 1.0 machine hours allowed per window. Variable manufacturing overhead is anticipated to be \$896,000. 170) _____

Actual production for was 58,000 windows using 60,000 machine hours. Actual variable costs were \$15 per machine hour.

Required:

Calculate the variable overhead spending and efficiency variances.

- 171) Heather's Pillow Company manufactures pillows. The current year operating budget is based on production of 20,000 pillows with 0.5 machine-hour allowed per pillow. Variable manufacturing overhead is anticipated to be \$210,000. 171) _____

Actual production was 18,000 pillows using 9,250 machine-hours. Actual variable costs were \$20 per machine-hour.

Required:

Calculate the variable overhead spending and efficiency variances.

172) DeNozio Enterprises gathered the following information for the month of July:

172) _____

Overhead flexible budget:

Number of units	9,000	12,000	
Standard machine hours	12,000	16,000	
Budgeted variable overhead costs	\$27,000	\$36,000	
Budgeted fixed overhead costs	\$51,000	\$51,000	

Gordon actually produced 13,000 units in 16,400 machine hours. Total actual overhead costs of \$82,000 consisted of \$33,000 variable costs and \$49,000 fixed costs. The standard variable and fixed overhead rates are based on a master (static) budget of 12,000 units. Assume the allocation base for overhead costs is the number of units.

Required:

1. Compute the total manufacturing overhead cost variance.
2. Compute the variable overhead flexible budget variance.
3. Compute the fixed overhead budget variance.
4. Compute the production volume variance.

173) The Violet Company established a master budget volume of 30,000 units for September. Actual overhead costs incurred amounted to \$84,500 and included variable overhead of \$56,000 and fixed overhead of \$28,500. Actual production for the month was 32,000 units. The standard variable overhead rate was \$2 per direct labour hour. The standard fixed overhead rate was \$1.50 per direct labour hour. One direct labour hour is the standard quantity per finished unit. Assume the allocation base for fixed overhead costs is the number of direct labour hours.

173) _____

Required:

1. Compute the total manufacturing overhead cost variance.
2. Compute the variable overhead flexible budget variance.
3. Compute the fixed overhead budget variance.
4. Compute the production volume variance.

- 174) Brahma manufactures western hats. The company prepares flexible budgets and uses a standard cost system to control manufacturing costs. The following standard unit cost of a hat is based on the static budget volume of 14,000 hats per month:

Direct materials (3.0 m ² × \$6.00 per m ²)	\$18.00	
Direct labour (2 hours × \$18 per hour)	36.00	
Manufacturing overhead:		
Variable (2 hours × \$1.25 per hour)	\$2.50	
Fixed (2 hours × \$2.75 per hour)	<u>5.50</u>	<u>8.00</u>
Total cost per hat.		<u>\$62.00</u>

Data for January of the current year include the following:

- Actual production was 13,600 hats.
- Actual direct materials purchased and used was 36,720 m² per hat at an actual cost of \$6.30 per m².
- Actual direct labour usage of 27,500 hours cost \$522,500.
- Total actual overhead cost was \$110,500.

Required:

- Compute the price and efficiency variances for direct materials and direct labour.
- For manufacturing overhead, compute the total variance, the flexible budget variance, and the production volume variance.

- 175) Brahma manufactures western hats. The company prepares flexible budgets and uses a standard cost system to control manufacturing costs. The following standard unit cost of a hat is based on the static budget volume of 20,000 hats per month:

Direct materials (2.5 m ² × \$5.00 per m ²)	\$12.00	
Direct labour (2 hours × \$15 per hour)	30.00	
Manufacturing overhead:		
Variable (2 hours × \$2.50 per hour)	\$5.00	
Fixed (2 hours × \$3.75 per hour)	<u>7.50</u>	<u>12.50</u>
Total cost per hat		<u>\$54.50</u>

Data for January of the current year include the following:

- Actual production was 18,000 hats.
- Actual direct materials purchased and used was 48,600 m² per hat at a cost of \$257,58
- Actual direct labour usage of 38,500 hours cost \$539,000.
- Total actual overhead cost was \$240,000.

Required:

- Compute the price and efficiency variances for direct materials and direct labour.
- For manufacturing overhead, compute the total variance, the flexible budget variance, and the production volume variance.

- 176) Brahma manufactures western hats. The company prepares flexible budgets and uses a standard cost system to control manufacturing costs. The following standard unit cost of a hat is based on the static budget volume of 20,000 hats per month:

Direct materials (2.5 m ² × \$5.00 per m ²)		\$12.00
Direct labour (2 hours × \$15 per hour)		30.00
Manufacturing overhead:		
Variable (2 hours × \$2.50 per hour).	\$5.00	
Fixed (2 hours × \$3.75 per hour)	<u>7.50</u>	<u>12.50</u>
Total cost per hat.		<u>\$54.50</u>

Data for January of the current year include the following:

- Actual production was 22,000 hats.
- Actual direct materials purchased and used was 2.70 m² per hat at an actual cost of \$4.90 per m².
- Actual direct labour usage of 45,500 hours cost \$659,750.
- Total actual overhead cost was \$290,000.

Required:

- Compute the price and efficiency variances for direct materials and direct labour.
- For manufacturing overhead, compute the total variance, the flexible budget variance, and the production volume variance.

- 177) Ever-Sharp Lawnmowers Ltd. controls variable manufacturing overhead costs with assembly-line hours as the denominator. Fixed manufacturing overhead costs are applied on a unit-of-output basis. Each lawnmower is allowed 10 assembly-line hours and standard variable manufacturing overhead totals \$650 per unit. Budgeted fixed manufacturing overhead totals \$29,400 for 420 lawnmowers. During July 4,200 assembly-line hours were incurred and 400 lawnmowers were produced. Actual manufacturing overhead costs for July were \$260,400 for variable expenses and \$32,300 for fixed expenses.

Required: Calculate the variable manufacturing overhead spending and efficiency variance, and the fixed manufacturing overhead budget and volume variances.

- 178) Different management levels in Bates Inc. require varying degrees of managerial accounting information. Because of the need to comply with the managers' requests, four different variances for manufacturing overhead are computed each month. All overhead is allocated on the basis of direct labour hours. The information for the September overhead expenditures follows:

Budgeted output units	3,200 units
Budgeted fixed manufacturing overhead	\$20,000
Budgeted variable manufacturing overhead	\$5.00 per direct labour hour
Budgeted direct manufacturing labour hours	2 hours per unit
Fixed manufacturing costs incurred	\$23,000
Direct manufacturing labour hours used	7,200
Variable manufacturing costs incurred	\$35,600
Actual units manufactured	3,400

Required: Calculate the variable manufacturing overhead spending and efficiency variances and, the fixed manufacturing overhead budget and volume variances.

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 179) Can the variable overhead efficiency variance
- be *computed* the same way as the efficiency variance for direct-cost items?
 - be *interpreted* the same way as the efficiency variance for direct-cost items? Explain.

MATCHING. Choose the item in column 2 that best matches each item in column 1.

Match the following:

180) Direct material price variance	A) Purchasing department	180) _____
181) Direct labour price variance	B) Marketing department	181) _____
182) Direct labour efficiency variance	C) Personnel department	182) _____
183) Sales volume variance	D) Production department	183) _____
184) Direct material efficiency variance		184) _____

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 185) A static budget is a budget prepared for multiple volume levels. 185) _____
- 186) Another name for a static budget is a flexible budget. 186) _____
- 187) In a flexible budget, total fixed costs change as production volume changes. 187) _____
- 188) The flexible budget total cost formula applies only to a specific relevant range. 188) _____

- 189) In a flexible budget, total variable costs change as production volume changes. 189) _____
- 190) Flexible budgets are budgets that summarize cost and revenue information for multiple volume levels. 190) _____
- 191) Both the static budget and the flexible budget used for performance evaluation are developed before the period of actual production. 191) _____
- 192) A static budget variance is the difference between the static budget and the flexible budget. 192) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 193) Which budget is best for managers to use to plan revenues and expenses at different sales volumes? 193) _____
 A) Flexible budget B) Static budget
 C) Master budget D) Capital budget
- 194) Which of the following is TRUE regarding a static budget? 194) _____
 A) A static budget is adjusted for changes in the level of sales activity.
 B) A static budget is prepared for only one level of sales activity.
 C) A static budget is also known as a fixed budget.
 D) A static budget is a budget that stays the same from one period to the next.
- 195) Which of the following is a budget based on a single predicted amount of sales or production? 195) _____
 A) Standard budget B) Fixed budget
 C) Flexible budget D) Static budget
- 196) Which of the following statements regarding static budgets is TRUE? 196) _____
 A) They are prepared for a range of activity levels.
 B) Managers use them to help plan for uncertainties.
 C) They are designed to estimate revenues only.
 D) They are prepared for one level of sales volume.
- 197) A variance is considered to be 197) _____
 A) the difference between a budgeted amount and a standard amount.
 B) the gap between an actual result and a benchmark amount.
 C) the difference between an actual result and a budget amount.
 D) the required number of inputs for one standard output.

198) Sunny Dayz sells bottles of sun screen lotion for \$8.00 each. Variable costs are \$4.50 per bottle, while fixed costs are \$42,000 per month for volumes up to 20,000 bottles of lotion and \$52,000 per month for volumes above 20,000 bottles of lotion. The flexible budget would reflect monthly operating income for 18,000 bottles of lotion and 23,000 bottles of lotion of what dollar amounts?
 A) \$102,000 and \$38,500, respectively
 B) \$144,000 and \$184,000, respectively
 C) \$132,000 and \$11,000, respectively
 D) \$21,000 and \$28,500, respectively

199) A graph of a flexible budget formula reflects fixed costs of \$30,000 per month and total costs of \$60,000 at a volume of 6,000 units. Assuming the relevant range is 1,000 to 12,000 units, the graph would reflect total monthly costs at 10,000 units of what dollar amount?
 A) \$100,000
 B) \$900,000
 C) \$800,000
 D) \$60,000

200) Corbett Company makes blenders. The budgeted selling price is \$35 per blender, the variable cost is \$18 per blender and budgeted fixed costs are \$32,000 per month. What is the budgeted operating income for 2,000 blenders sold in a month?
 A) \$36,000
 B) \$70,000
 C) \$68,000
 D) \$2,000

Outdoor Creations sells its patio heaters for \$300 each. Its variable cost is \$220 per heater. Fixed costs are \$40,000 per month for volumes up to 1,000 heaters. Above 1,000 heaters, monthly fixed costs are \$62,000.

201) What is the Outdoor Creations' budgeted operating income at a level of 800 patio heaters per month?
 A) \$2,000
 B) \$200,000
 C) \$64,000
 D) \$24,000

202) What is the Outdoor Creations' budgeted operating income at a level of 1,300 heaters per month?
 A) \$328,000
 B) \$42,000
 C) \$104,000
 D) \$64,000

203) Universal Remotes makes remote controls for home theater systems. The budgeted selling price is \$125 per remote control, the variable cost is \$72 per remote control and budgeted fixed costs are \$210,000 per month. What is the budgeted operating income for 12,000 remote controls sold in a month?
 A) \$1,074,000
 B) \$426,000
 C) \$864,000
 D) \$1,500,000

204) Rockwell Corporation manufactures and sells computer keyboards. The keyboard sells for \$55 per unit and its variable costs per unit are \$42. Fixed costs are \$80,000 per month for sales volumes up to 40,000 keyboards. If more than 40,000 keyboards are sold, the fixed costs will be \$110,000. The flexible budget would reflect what monthly operating income for a sales volume of 52,000 keyboards?
 A) \$566,000
 B) \$2,860,000
 C) \$596,000
 D) \$676,000

Myer Appliances sells its microwave ovens for \$110 each. Its variable cost is \$65 per microwave oven. Fixed costs are \$90,000 per month for volumes up to 2,000 microwave ovens. Above 2,000 microwave ovens, monthly fixed costs are \$135,000.

205) What is the Myer Appliances' budgeted operating income (loss) at a sales level of 1,900 microwave ovens per month?
 A) Operating loss of \$49,500
 B) Operating loss of \$4,500
 C) Operating income of \$119,000
 D) Operating income of \$85,500

206) What is the Myer Appliances' budgeted operating income (loss) at a sales level of 2,500 microwave ovens per month?

206) _____

- A) Operating loss of \$22,500
B) Operating income of \$112,500
C) Operating income of \$22,500
D) Operating income of \$140,000

Use the information below to answer the following question(s).

Ames Golf Company used the following data to evaluate their current operating system. The company sells 1 pack of golf bal \$10 per pack. The \$10 selling price is also the budgeted selling price.

	Budgeted	Actual
Units Sold	1,000,000	990,000
Variable Costs	\$3,000,000	\$2,500,000
Fixed Costs	\$1,800,000	\$1,850,000

207) What is the actual operating income for Ames Golf Company using the actual results?

207) _____

- A) \$5,970,000
B) \$5,550,000
C) \$4,750,000
D) \$5,200,000

208) What is the budgeted operating income for Ames Golf Company?

208) _____

- A) \$5,200,000
B) \$5,970,000
C) \$4,750,000
D) \$5,550,000

209) What is the total static budget variance for Ames Golf Company?

209) _____

- A) \$350,000 favourable
B) \$390,000 unfavourable
C) \$450,000 unfavourable
D) \$400,000 favourable

210) What operating income would be expected on Ames' flexible budget?

210) _____

- A) \$5,130,000
B) \$9,900,000
C) \$5,200,000
D) \$ 350,000

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

211) Scion Corporation provided the following partially completed monthly flexible budget. Complete the flexible budget.

211) _____

	Flexible Budget Formula per Unit	Flexible Budget for Various Levels of Volume		
Units		8,000	9,000	10,000
Sales revenue	\$20.00			
Variable expenses			\$54,000	
Fixed expenses		\$75,000		
Total expenses				
Operating income				\$65,000

- 212) Tucker Supply sells a unit of its product for \$10.00, resulting in a contribution margin of \$8.00 per unit. Fixed costs are budgeted at \$52,000 per quarter for volumes up to 15,000 units and \$78,000 for volumes exceeding 15,000 units. 212) _____

Prepare the flexible budget for the next quarter for volume levels of 12,000, 18,000, and 25,000 units.

- 213) A company's flexible budget for 80,000 units of production showed sales of \$240,000; variable costs of \$120,000; and fixed costs of \$80,000. What net operating income would you expect the company to earn if it produces and sells 83,000 units? (Assume 83,000 units is in the relevant range.) 213) _____

- 214) GoTray Inc., produces plastic tray used in cafeterias. 214) _____
The company's static budget income statement for January follows. It is based on expected volume of 5,500 trays.

GoTray Inc. Static Budget Income Statement Month Ended January 31	
Sales revenue	<u>\$16,500</u>
Variable expenses:	
Cost of goods sold	\$6,325
Sales commissions	1,375
Utilities expense	1,100
Fixed expenses:	
Salary expense	3,250
Depreciation expense	2,000
Rent expense	1,000
Utilities expense	<u>500</u>
Total expenses	\$ <u>15,550</u>
Operating income	<u><u>\$950</u></u>

GoTray's manufacturing capacity is 6,250 trays. If actual volume exceeds 6,250 trays, the company must expand the plant. In that case, salaries will increase by 20%, depreciation by utilities by \$300 and rent by \$800.

Prepare flexible budget income statements for the company, showing output levels of 5,500, 6,000 and 6,500 trays.

- 215) SnoGo, Inc., produces plastic tray used in cafeterias and for snow sledding. The company's static budget income statement for January follows. It is based on expected volume of 50,000 trays.

215) _____

SnoGo Inc. Static Budget Income Statement Month Ended January 31	
Sales revenue	<u>\$50,000</u>
Variable expenses:	
Cost of goods sold	\$20,000
Sales commissions	5,000
Utilities expense	2,500
Fixed expenses:	
Salary expense	1,000
Depreciation expense	750
Rent expense	500
Utilities expense	<u>250</u>
Total expenses.	<u>\$30,000</u>
Operating income	<u><u>\$20,000</u></u>

SnoGo's manufacturing capacity is 62,500 trays. If actual volume exceeds 62,500 trays, the company must expand the plant. In that case, salaries will increase by 15%, depreciation by \$275, and rent by \$275. Fixed utilities will be unchanged by any volume increase.

Prepare flexible budget income statements for the company, showing output levels of 50,000, 60,000 and 70,000 trays.

- 216) SnoGo, Inc., produces ergonomic tools used for snow removal. The company's static budget income statement for January follows. It is based on expected sales volume of 5,500 tools. 216) _____

SnoGo Inc. Static Budget Income Statement Month Ended January 31	
Sales revenue	<u>\$82,500</u>
Variable expenses:	
Cost of goods sold	\$31,625
Sales commissions	6,875
Utilities expense	5,500
Fixed expenses:	
Salary expense	15,000
Depreciation expense	10,000
Rent expense	5,000
Utilities expense	<u>2,500</u>
Total expenses	\$ <u>76,500</u>
Operating income	<u>\$6,000</u>

SnoGo's manufacturing capacity is 6,250 tools. If actual volume exceeds 6,250 tools, the company must expand the plant. In that case, salaries will increase by 10%, depreciation by rent by \$1,500, and fixed utilities by \$500.

Prepare flexible budget income statements for the company, showing output levels of 5,500, 6,000 and 6,500 tools.

- 217) SnoGo, Inc., produces ergonomic tool used for snow removal. The company's static budget income statement for January follows. It is based on expected sales volume of 11,000 tools. 217) _____

SnoGo Inc. Static Budget Income Statement Month Ended January 31	
Sales revenue	<u>\$330,000</u>
Variable expenses:	
Cost of goods sold	\$63,250
Sales commissions	27,500
Utilities expense	22,000
Fixed expenses:	
Salary expense	30,000
Depreciation expense	25,000
Rent expense	10,000
Utilities expense	<u>5,000</u>
Total expenses	<u>\$182,750</u>
Operating income	<u>\$147,250</u>

SnoGo's manufacturing capacity is 12,000 tools. If actual volume exceeds 12,000 tools, the company must expand the plant. In that case, salaries will increase by 10%, depreciation by 10% and rent by \$1,500. Fixed utilities will be unchanged by any volume increase.

Prepare flexible budget income statements for the company, showing output levels of 11,000, 12,000 and 13,000 tools.

- 218) SnoGo, Inc., produces ergonomic tool used for snow removal. The company's static budget income statement for January follows. It is based on expected sales volume of 11,000 tools. 218) _____

SnoGo Inc. Static Budget Income Statement Month Ended January 31	
Sales revenue	<u>\$495,000</u>
Variable expenses:	
Cost of goods sold	\$121,000
Sales commissions	66,000
Utilities expense	38,500
Fixed expenses:	
Salary expense	50,000
Depreciation expense	40,000
Rent expense	15,000
Utilities expense	<u>7,500</u>
Total expenses	<u>\$338,000</u>
Operating income	<u>\$157,000</u>

SnoGo's manufacturing capacity is 12,000 tools. If actual volume exceeds 12,000 tools, the company must expand the plant. In that case, salaries will increase by 10%, depreciation by 10% and rent by \$1,500. Fixed utilities will be unchanged by any volume increase.

Prepare flexible budget income statements for the company, showing output levels of 11,000, 12,000 and 13,000 tools.

- 219) Caan Corporation used the following data to evaluate their current operating system. The company sold its items for \$20 each and used a budgeted selling price of \$21 per unit. 219) _____

	<u>Actual</u>	<u>Budgeted</u>
Units sold	200,000 units	203,000 units
Variable costs	\$1,250,000	\$1,500,000
Fixed costs	\$ 875,000	\$ 900,000

Required:

Prepare a static-budget variance analysis using a income statement in contribution margin format. Use the following three column headings: Actual Results, Static Budget, Static-budget Variance.

MATCHING. Choose the item in column 2 that best matches each item in column 1.

Match the following:

- | | | |
|---|--------------------------------------|------------|
| 220) The difference between the actual quantity of input and standard quantity of input allowed for actual output, multiplied by the standard unit price of input | A) Benchmarking | 220) _____ |
| | B) Variance | |
| | C) Flexible budget | |
| 221) Using standards based on the "best practice" level of performance | D) Efficiency variance | 221) _____ |
| 222) A summarized budget that can easily be computed for several volume levels | E) Overhead flexible budget variance | 222) _____ |
| | F) Sales volume variance | |
| 223) The difference between the actual overhead cost incurred and the flexible budget amount of overhead cost for actual production | G) Flexible budget variance | 223) _____ |
| 224) Arises because the number of units actually sold differs from the static budget units | | 224) _____ |
| 225) The difference between an actual result and a flexible budget amount for the actual output | | 225) _____ |
| 226) The difference between an actual amount and the corresponding budgeted amount | | 226) _____ |

- | | | |
|---|--|------------|
| 227) The difference between the actual and standard unit price of input, multiplied by the actual quantity of input | A) Static budget
B) Standard cost | 227) _____ |
| 228) The difference between the overhead cost in the flexible budget for actual production and the standard overhead cost allocated to production | C) Production volume variance
D) Price variance | 228) _____ |
| 229) A carefully predetermined cost that usually is expressed on a per unit basis | | 229) _____ |
| 230) The budget prepared for only one level of sales volume | | 230) _____ |

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- | | |
|--|------------|
| 231) The sales volume variance arises because the number of units actually sold differs from the number of units expected to be sold according to the static budget. | 231) _____ |
| 232) The flexible budget variance arises because the number of units actually sold differs from the static budget units. | 232) _____ |
| 233) The sales volume variance is the difference between the static budget and the flexible budget for sales revenue, variable expenses, fixed expenses or operating income. | 233) _____ |
| 234) The flexible budget used for performance evaluation is based on the original budgeted number of outputs. | 234) _____ |
| 235) A favourable budget variance occurs when actual expenses are greater than flexible budget expenses. | 235) _____ |
| 236) The flexible budget variance is the difference between the flexible budget and the static budget. | 236) _____ |
| 237) The sales volume variance is the difference between the static budget and the flexible budget. | 237) _____ |
| 238) The sales volume variance of operating income is a measure of efficiency. | 238) _____ |

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 239) The _____ variance is the difference between the number of units actually sold and the volume of sales originally planned for. 239) _____
A) materials price B) sales volume
C) labour efficiency D) flexible budget
- 240) Assuming that all activity is within the relevant range, a decrease in the activity level in a flexible budget will 240) _____
A) decrease the variable cost per unit. B) decrease total fixed costs.
C) decrease total costs. D) increase the variable cost per unit.
- 241) A sales volume variance for units is the difference between the 241) _____
A) number of units in the flexible budget at two levels of activity.
B) actual units sold and the number of units in the flexible budget.
C) actual sales volume and normal sales volume.
D) number of units actually sold and number of units expected to be sold according to the static budget.
- 242) A sales volume variance for revenue is the difference between the 242) _____
A) number of units actually sold times the budgeted selling price per unit and the static budget revenue.
B) actual revenue and the static budget revenue.
C) budgeted number of unit times the actual selling price per unit and the static budget revenue.
D) number of units actually sold and number of units expected to be sold according to the static budget.
- 243) A flexible budget variance for revenue is the difference between the 243) _____
A) number of units actually sold and number of units expected to be sold according to the static budget.
B) budgeted number of unit times the actual selling price per unit and the actual revenue.
C) actual revenue and the flexible budget revenue.
D) number of units actually sold times the budgeted selling price per unit and the static budget revenue.
- 244) A flexible budget variance is the difference between 244) _____
A) the budgeted amounts for each level of sales in the flexible budget.
B) actual results and amounts in the static budget.
C) amounts in the flexible budget and the static budget.
D) amounts in the flexible budget and the actual results.

- 245) The difference between actual costs and the costs that should have been incurred for the actual number of outputs is called the _____
 A) static budget variance. B) sales volume variance.
 C) price variance. D) flexible budget variance.
- 246) Which budget is based on the expected number of sales? _____
 A) Operating budget
 B) Flexible budget used for evaluating performance
 C) Output budget
 D) Static budget
- 247) Which term below is best paired with "arises when actual sales volume differs from expected sales volume"? _____
 A) Standard budget B) Overhead flexible budget variance
 C) Sales volume variance D) Static budget variance
- 248) Dambrodt Travel Agency's actual operating income for the current year is \$25,000. The flexible budget's operating income for actual volume achieved is \$32,000, while the static budget's operating income is \$35,000. What is the sales volume variance for operating income? _____
 A) \$7,000 favourable B) \$3,000 favourable
 C) \$3,000 unfavourable D) \$7,000 unfavourable
- 249) A.C. Catering reported actual operating income for the current year of \$40,000. The flexible budget's operating income for actual volume achieved is \$38,000, while the static budget's operating income is \$35,000. What is the flexible budget variance for operating income? _____
 A) \$2,000 unfavourable B) \$5,000 favourable
 C) \$5,000 unfavourable D) \$2,000 favourable

Zany Brainy projected current year sales of 50,000 units at a unit sale price of \$20.00. Actual current year sales were 55,000 units at \$22.00 per unit. Variable costs were budgeted at \$14.00 per unit and actually totaled \$15.00 per unit. Budgeted fixed costs totaled \$400,000, while actual fixed costs amounted to \$420,000.

- 250) What is the Zany Brainy's sales volume variance for total revenue? _____
 A) \$110,000 unfavourable B) \$100,000 favourable
 C) \$110,000 favourable D) \$100,000 unfavourable
- 251) What is the Zany Brainy's flexible budget variance for variable expenses? _____
 A) \$50,000 unfavourable B) \$50,000 favourable
 C) \$55,000 unfavourable D) \$55,000 favourable
- 252) What is the Zany Brainy's flexible budget variance for total expenses? _____
 A) \$75,000 favourable B) \$55,000 favourable
 C) \$75,000 unfavourable D) \$55,000 unfavourable

- 253) What is the Zany Brainy's flexible budget variance for operating income? 253) _____
 A) \$65,000 unfavourable B) \$35,000 unfavourable
 C) \$65,000 favourable D) \$35,000 favourable
- 254) What is the Zany Brainy's sales volume variance for total expenses? 254) _____
 A) \$110,000 favourable B) \$70,000 favourable
 C) \$110,000 unfavourable D) \$70,000 unfavourable
- 255) What is the Zany Brainy's sales volume variance for operating income? 255) _____
 A) \$65,000 unfavourable B) \$65,000 favourable
 C) \$30,000 unfavourable D) \$30,000 favourable

Kid Adventures Company projected current year sales of 3,600 swing sets at a unit sale price of \$225.00. Actual current year sales were 3,300 units at \$215.00 per unit. Variable costs were budgeted at \$166.00 per unit and actually cost \$175.00 per unit. Budgeted fixed costs totaled \$122,000, while actual fixed costs amounted to \$118,000.

- 256) What is the Kid Adventures Company's sales volume variance for total revenue? 256) _____
 A) \$67,500 unfavourable B) \$64,500 unfavourable
 C) \$64,500 favourable D) \$67,500 favourable
- 257) What is the Kid Adventures Company's sales volume variance for variable expenses? 257) _____
 A) \$ 49,800 Unfavourable B) \$ 547,800 Favourable
 C) \$ 547,800 Unfavourable D) \$ 49,800 Favourable
- 258) What is the Kid Adventures Company's sales volume variance for fixed expenses? 258) _____
 A) \$ 49,800 Favourable B) \$ 4,000 Favourable
 C) \$ 0 D) \$ 4,000 Unfavourable
- 259) What is the Kid Adventures Company's flexible budget variance for variable expenses? 259) _____
 A) \$29,700 unfavourable B) \$32,400 favourable
 C) \$32,400 unfavourable D) \$29,700 favourable
- 260) What is the Kid Adventures Company's flexible budget variance for total expenses? 260) _____
 A) \$25,700 favourable B) \$29,700 favourable
 C) \$29,700 unfavourable D) \$25,700 unfavourable
- 261) What is the Kid Adventures Company's flexible budget variance for operating income? 261) _____
 A) \$76,400 unfavourable B) \$58,700 favourable
 C) \$76,400 favourable D) \$58,700 unfavourable
- 262) What is the Kid Adventures Company's sales volume variance for operating income? 262) _____
 A) \$17,700 favourable B) \$17,700 unfavourable
 C) \$76,400 favourable D) \$76,400 unfavourable

- 263) A packaging company produces cardboard boxes in an automated process. The required direct materials costs \$0.30 per unit. Fixed manufacturing overhead costs are budgeted at \$24,000 per month and are allocated based on units of production. The budgeted contribution margin per unit is \$0.85, and administration fixed costs are budgeted at \$7,500 per month. What is the flexible-budget amount for operating income for 40,000 and 20,000 units, respectively?
- A) \$2,500; <\$14,500> B) \$26,000; \$20,000
C) \$36,000; \$30,000 D) \$44,000; \$38,000

263) _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 264) On the line at the end of each sentence, put the letter of the phrase that best completes the sentence.

264) _____

- A. Actual number of outputs
- B. Expected number of outputs
- C. Sales volume variance
- D. Beginning of the period
- E. End of the period
- F. Flexible budget variance
- G. Static budget variance

1. The flexible budget used in an income statement performance report is based on the _____.
2. The master budget is based on the _____.
3. The difference between actual costs and the costs that should have been incurred for the actual number of outputs is the _____.
4. The flexible budget used in an income statement performance report is developed at the _____.
5. The static budget is developed at the _____.

- 265) The Bird Brainz Corporation produces and sells two types of bird cages, deluxe and regular. The Bird Brainz Corporation provides the following data:

265) _____

	Budget	Actual
Deluxe cage — selling price	\$110.00	\$105.00
Regular cage — selling price	\$52.00	\$49.00
Deluxe cage — sales in units	25	27
Regular cage — sales in units	110	98

Compute the flexible budget variance and the sales volume variance for sales revenue for deluxe and regular bird cages.

- 266) The Flashlight Company projected yearly sales of 12,000 units at \$15.00 per unit. Actual sales for the year were 15,000 units at \$16.00 per unit. Variable expenses, budgeted at \$10.00 per unit, actually amounted to \$15.00 per unit. Fixed expenses, budgeted at \$50,000, actually totaled \$48,000.

266) _____

Prepare the Flashlight Company's income statement performance report for the year ended December 31, including both flexible budget variances and sales volume variances.

- 267) Breezy Fan Company manufactures ceiling fans Breezy Fan estimated yearly sales of 20,000 units at \$16 per unit. Actual sales for the year were 22,000 units at \$16.50 per unit. Variable expenses were budgeted at \$6 per unit, and actual variable expenses were \$6.50 per unit. Actual fixed costs were \$78,400, and budgeted fixed costs were \$75,000.

267) _____

Prepare Breezy Fan's income statement performance report, including flexible budget variance and sales volume variances, for the year ended December 31.

- 268) Tuff Stuff Company's managers received the following incomplete performance report:

268) _____

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static Bu
Output units	18,000		18,000	2,000 F	
Sales revenue	\$108,000		\$108,000	\$12,000 F	
Variable expenses	42,000		40,500	4,500 U	
Fixed expenses	53,000		50,000	--- 0 ---	
Total expenses	95,000		90,500	4,500 U	
Operating income	\$13,000		\$17,500	\$7,500 F	

Find the missing data by completing the performance report. Identify the employee group that may deserve praise and the group that may be subject to criticism. Give your reasons.

- 269) Tuff Stuff Company's managers received the following incomplete performance report:

269) _____

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static Bu
Output units	27,000		27,000	3,000 F	
Sales revenue	\$162,000		\$162,000	\$18,000 F	
Variable expenses	63,000		60,750	6,750 U	
Fixed expenses	79,500		75,000	--- 0 --	
Total expenses	142,500		135,750	6,750 U	
Operating income	\$ 19,500		\$ 26,250	\$11,250 F	

Find the missing data by completing the performance report. Identify the employee group that may deserve praise and the group that may be subject to criticism. Give your reasons.

270) Tuff Stuff Company's managers received the following incomplete performance report:

270) _____

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static Bu
Output units	19,000		19,000	1,000 F	
Sales revenue	\$109,500		\$109,500	\$12,000 F	
Variable expenses	40,500		40,000	5,000 U	
Fixed expenses	53,500		50,000	--- 0 ---	
Total expenses	94,000		90,000	5,000 U	
Operating income	\$15,500		\$19,500	\$7,000 F	

Find the missing data by completing the performance report. Identify the employee group that may deserve praise and the group that may be subject to criticism. Give your reasons.

271) Tuff Stuff Company's managers received the following incomplete performance report:

271) _____

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static Bu
Output units	57,000		57,000	3,500 F	
Sales revenue	\$328,500		\$313,500	\$19,250 F	
Variable expenses	121,500		119,700	7,350 U	
Fixed expenses	160,500		150,000	---0---	
Total expenses	282,000		269,700	7,350 U	
Operating income	\$46,500		43,800	11,900 F	

Find the missing data by completing the performance report. Identify the employee group that may deserve praise and the group that may be subject to criticism. Give your reasons.

- 272) Handco has a relevant range extending to 60,000 units each month. The following performance report provides information about Handco's budget and actual performance for April.

272) _____

HANDCO
Income Statement Performance Report
Month Ended April 30

	Actual Results at Actual prices	(A)	Flexible Budget for Actual Number of Output Units	(B)	Statistical E
Output units	50,000		(C)		
Sales revenue	\$480,000	\$10,000 F	(D)		
Variable expenses			(E)		
Fixed expenses	\$30,000	(F)			
Total expenses					
Operating income					

Required:

Find the missing data for letters A-G. Be sure to label any variances as favourable or unfavourable.

- 273) Handco has a relevant range extending to 60,000 units each month. The following performance report provides information about Handco's budget and actual performance for April.

273) _____

HANDCO COMPANY
Income Statement Performance Report
Month Ended April 30

	Actual Results at Actual prices	(A)	Flexible Budget for Actual Number of Output Units	(B)	Statistical E
Output units	40,000		(C)		
Sales revenue	\$320,000	\$8,000 F	(D)		
Variable expenses			(E)		
Fixed expenses	\$24,000	(F)			
Total expenses					
Operating income					

Required:

Find the missing data for letters A-G. Be sure to label any variances as favourable or unfavourable.

- 274) Linkin Co. has a relevant range extending to 20,000 units each month. The following performance report provides information about Linkin Co.'s budget and actual performance for April.

274) _____

LINKIN COMPANY
Income Statement Performance Report
Month Ended April 30

	Actual Results at Actual prices	(A)	Flexible Budget for Actual Number of Output Units	(B)	Status
Output units	13,000		(C)		
Sales revenue	\$125,500	\$2,650F	(D)		
Variable expenses			(E)		
Fixed expenses	7,500	(F)			
Total expenses					
Operating income					

Required:

Find the missing data for letters A-G. Be sure to label any variances as favourable or unfavourable.

- 275) Linkin Co. has a relevant range extending to 50,000 units each month. The following performance report provides information about Linkin Co.'s budget and actual performance for April.

275) _____

LINKIN COMPANY
Income Statement Performance Report
Month Ended April 30

	Actual Results at Actual prices	(A)	Flexible Budget for Actual Number of Output Units	(B)	Status
Output units	39,000		(C)		
Sales revenue	\$376,500	\$7,950F	(D)		
Variable expenses			(E)		
Fixed expenses	22,500	(F)			
Total expenses					
Operating income					

Required:

Find the missing data for letters A-G. Be sure to label any variances as favourable or unfavourable.

- 276) Whistler Table Company manufactures tables for schools. The current year operating budget is based on sales of 20,000 units at \$150 per table. Operating income is anticipated to be \$220,000. Budgeted variable costs are \$94 per unit while fixed costs total \$900,000. 276) _____

Actual income for the year was \$3,234,000 on actual sales of 21,000 units. Actual variable costs were \$90 per unit and fixed costs totaled \$870,000.

Required:

Prepare an income statement performance report in contribution margin format. Provide the following column headings: Actual Results, Flexible Budget Variance, Flexible Budget, Sales Volume Variance, Static Budget.

- 277) Bach Table Company manufactures tables for schools. The current year operating budget is based on sales of 40,000 units at \$50 per table. Operating income is anticipated to be \$300,000. Budgeted variable costs are \$30 per unit, while fixed costs total \$500,000. 277) _____

Actual income for the year was a surprising \$2,268,000 on actual sales of 42,000 units. Actual variable costs were \$33 per unit and fixed costs totaled \$550,000.

Required:

Prepare an income statement performance report in contribution margin format. Provide the following column headings: Actual Results, Flexible Budget Variance, Flexible Budget, Sales Volume Variance, Static Budget.

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 278) Explain the difference between a static budget and a flexible budget. Explain what is meant by a static budget variance and a flexible budget variance.

MATCHING. Choose the item in column 2 that best matches each item in column 1.

Match the following:

- | | | |
|---|--------------------------------------|------------|
| 279) Measures how well the business keeps unit prices of direct material and direct labour inputs within standards | A) Overhead flexible budget variance | 279) _____ |
| | B) Price variance | |
| 280) Measures whether the quantity of direct materials or direct labour used to make the actual number of outputs is within the standard allowed for that number of outputs | C) Efficiency variance | 280) _____ |
| 281) Shows how well management has controlled overhead costs | | 281) _____ |

- | | | |
|---|-------------------------------|------------|
| 282) A budget for a single unit | A) Static budget | 282) _____ |
| 283) Prepared for one level of sales volume | B) Standard cost | 283) _____ |
| | C) Production volume variance | |
| 284) Arises when actual production volume differs from expected production volume | | 284) _____ |

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- | | |
|--|------------|
| 285) If a company recognizes variances at the earliest point possible, raw materials inventory will be debited for the actual quantity of raw materials purchased and costed at the actual price paid per unit. | 285) _____ |
| 286) A debit balance in the direct materials price variance indicates the standard cost of materials was more than the actual cost of materials. | 286) _____ |
| 287) In standard costing, the overhead cost allocated to work in process inventory is computed at the standard predetermined overhead rate times the actual quantity of the allocation base used in production. | 287) _____ |
| 288) Manufacturing cost variances are shown as adjustments to cost of goods sold at actual cost on a standard cost income statement. | 288) _____ |
| 289) A standard cost income statement shows cost of goods sold at standard and actual cost. | 289) _____ |
| 290) When a company uses direct materials, the amount of the debit to Work in Process Inventory is based on the standard quantity of the materials allowed for the actual production times the standard price per unit of the materials. | 290) _____ |
| 291) A credit balance means that a variance is <i>unfavourable</i> since it decreases income. | 291) _____ |

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- | | |
|---|------------|
| 292) The entry to allocate manufacturing overhead costs to production involves which of the following? | 292) _____ |
| A) Credit to work in process inventory for the actual cost of overhead | |
| B) Credit to work in process inventory for the standard rate of overhead times the standard quantity of the allocation base allowed for actual output | |
| C) Debit to work in process inventory for the actual cost of overhead | |
| D) Debit to work in process inventory for the standard rate of overhead times the standard quantity of the allocation base allowed for actual output | |

- 293) When recording the use of direct materials (measured in kilograms) in the production process, work in process inventory is debited for which of the following? 293) _____
- A) Actual quantity of direct materials used times actual cost per kilogram
 - B) Standard quantity of direct materials used for actual production output times actual cost per kilogram
 - C) Standard quantity of direct materials used for actual production output times standard cost per kilogram
 - D) Actual quantity of direct materials used times standard cost per kilogram
- 294) A company that records the direct materials price variance at the time of purchase will record the use of direct materials (measured in kilograms) in the production process by crediting raw materials inventory for which of the following? 294) _____
- A) Actual quantity of direct materials put into production times actual cost per kilogram
 - B) Standard quantity of direct materials used for actual production times standard cost per kilogram
 - C) Standard quantity of direct materials used for actual production times actual cost per kilogram
 - D) Actual quantity of direct materials put into production times standard cost per kilogram
- 295) When assigning direct labour costs to the production process using a standard cost system, which of the following shows the effect on work in process inventory? 295) _____
- A) Credited for standard quantity usage of direct labour for actual production times actual cost per hour
 - B) Credited for standard quantity of direct labour used for actual production times standard cost per hour
 - C) Debited for actual quantity of direct labour times standard cost per hour
 - D) Debited for standard quantity of direct labour used for actual production times standard cost per hour
- 296) Which of the following is true regarding a standard cost income statement? 296) _____
- A) Sales revenue is shown only at standard revenue.
 - B) Variances are listed separately.
 - C) Operating income is shown at standard cost.
 - D) Cost of goods sold is shown only at standard cost.
- 297) Which department listed below would most likely be responsible for a "direct material price variance"? 297) _____
- A) Purchasing department
 - B) Production department
 - C) Personnel department
 - D) Marketing department
- 298) Which department listed below would most likely be responsible for a "direct labour price variance"? 298) _____
- A) Personnel department
 - B) Finance department
 - C) Marketing department
 - D) Purchasing department

- 299) Which department listed below would most likely be responsible for a "direct labour efficiency variance"? 299) _____
- A) Personnel department B) Marketing department
C) Purchasing department D) Production department
- 300) Which department listed below would most likely be responsible for a "sales volume variance"? 300) _____
- A) Personnel department B) Purchasing department
C) Production department D) Marketing department
- 301) Which term below is best paired with "a summarized budget than can easily be computed for several volume levels"? 301) _____
- A) Sales volume variance B) Flexible budget
C) Benchmarking D) Overhead flexible budget variance
- 302) Which term below is best paired with "the difference between the actual overhead cost incurred and the flexible budget amount of overhead cost for actual number of output"? 302) _____
- A) Sales volume variance B) Flexible budget
C) Benchmarking D) Overhead flexible budget variance
- 303) Which term below is best paired with "arises because the number of units actually sold differs from the static budget units"? 303) _____
- A) Sales volume variance B) Flexible budget
C) Benchmarking D) Overhead flexible budget variance
- 304) During October Foxmore Inc. used \$250,000 in manufacturing overhead costs, of which \$66,500 was variable. Budgeted manufacturing overhead was \$229,500, of which \$75,000 was variable. Which of the following entries for manufacturing overhead could have been recorded? 304) _____
- A)

Manufacturing Overhead	75,000
Accounts Payable and other accounts	75,000
- B)

Manufacturing Overhead	66,500
Accounts Payable and other accounts	66,500
- C)

Manufacturing Overhead	75,000
Work in Process	75,000
- D)

Work in Process	66,500
Accounts Payable and other accounts	66,500

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

305) D. Tarr Manufacturing gathered the following information for the year ended December 31: 305) _____

	Actual	Standard
Sales	\$312,000	\$312,000
Cost of Goods Sold		180,000
Direct materials variances:		
Price variance		3,900 F
Efficiency variance		800 U
Direct labour variances:		
Price variance		2,200 U
Efficiency variance		800 F
Overhead variances:		
Flexible budget variance		1,850 F
Production volume variance		200 U
Selling and administrative expenses		72,000

Prepare a standard cost income statement for Freeport Enterprises for the year ended December 31.

306) Standard Products Company recognizes variances from standards at the earliest opportunity, and the quantity of direct materials purchased is equal to the quantity used. The following information is available for the most recent month. Assume the allocation base for fixed overhead costs is the number of units. 306) _____

	Direct materials	Direct Labor
Standard quantity/unit	6.00 lbs.	2.5 hrs.
Standard price/lb. or hr.	\$8.10/lb.	\$8.00/hr.
Actual quantity/unit	6.25 lbs.	2.8 hrs.
Actual price/lb. or hr.	\$8.00/lb.	\$7.50/hr.
Price variance	\$562.50 F	\$1,260.00 F
Efficiency variance	\$1,822.50 U	\$2,160.00 U
Static budget volume	800 units	
Actual volume	900 units	
Actual overhead cost	\$11,000	
Standard variable overhead cost	\$5/unit	
Standard fixed overhead cost	\$5,600	
Overhead flexible budget variance	\$900 U	
Production volume variance	\$700 F	

Journalize the purchase and usage of direct materials including the related variances.

307) Standard Products Company recognizes variances from standards at the earliest opportunity, and the quantity of direct materials purchased is equal to the quantity used. The following information is available for the most recent month. Assume the allocation base for fixed overhead costs is the number of units.

307) _____

	Direct materials	Direct Labor
Standard quantity/unit	6.00 lbs.	2.5 hrs.
Standard price/lb. or hr.	\$8.10/lb.	\$8.00/hr.
Actual quantity/unit	6.25 lbs.	2.8 hrs.
Actual price/lb. or hr.	\$8.00/lb.	\$7.50/hr.
Price variance	\$562.50 F	\$1,260.00 F
Efficiency variance	\$1,822.50 U	\$2,160.00 U
Static budget volume	800 units	
Actual volume	900 units	
Actual overhead cost	\$11,000	
Standard variable overhead cost	\$5/unit	
Standard fixed overhead cost	\$5,600	
Overhead flexible budget variance	\$900 U	
Production volume variance	\$700 F	

Journalize the direct labour costs incurred and the assignment of direct labour to Work in Process Inventory, including the related variances.

- 308) Standard Products Company recognizes variances from standards at the earliest opportunity, and the quantity of direct materials purchased is equal to the quantity used. The following information is available for the most recent month. Assume the allocation base for fixed overhead costs is the number of units.

308) _____

	Direct materials	Direct Labor
Standard quantity/unit	6.00 lbs.	2.5 hrs.
Standard price/lb. or hr.	\$8.10/lb.	\$8.00/hr.
Actual quantity/unit	6.25 lbs.	2.8 hrs.
Actual price/lb. or hr.	\$8.00/lb.	\$7.50/hr.
Price variance	\$562.50 F	\$1,260.00 F
Efficiency variance	\$1,822.50 U	\$2,160.00 U
Static budget volume	800 units	
Actual volume	900 units	
Actual overhead cost	\$11,000	
Standard variable overhead cost	\$5/unit	
Standard fixed overhead cost	\$5,600	
Overhead flexible budget variance	\$900 U	
Production volume variance	\$700 F	

Journalize the allocation of overhead costs to Work in Process Inventory and closing manufacturing overhead costs to overhead variances.

- 309) During the week, Hoster's potato chip manufacturing facility purchased 20,000 kilograms potatoes at a price of \$1.40 per kilogram. The standard price per kilogram is \$1.25. During week, 19,500 kg of potatoes were used. The standard quantity of potatoes that should have been used for the actual volume of output was 19,200 kg.

309) _____

Record the following transactions using a standard cost accounting system:

1. The purchase of potatoes
2. The use of potatoes
3. Are the variances favourable or unfavourable? Explain.

- 310) During the week, Hoster's potato chip manufacturing facility purchased 30,000 kilograms potatoes at a price of \$1.40 per kilogram. The standard price per kilogram is \$1.25. During week, 27,500 kg of potatoes were used. The standard quantity of potatoes that should have been used for the actual volume of output was 26,000 kg.

310) _____

Record the following transactions using a standard cost accounting system:

1. The purchase of potatoes
2. The use of potatoes
3. Are the variances favourable or unfavourable? Explain.

- 311) During the week, Hoster's potato chip manufacturing facility purchased 30,000 kilograms potatoes at a price of \$1.25 per kilogram. The standard price per kilogram is \$1.40. During week, 26,000 kg of potatoes were used. The standard quantity of potatoes that should have been used for the actual volume of output was 26,500 kg. 311) _____

Record the following transactions using a standard cost accounting system:

1. The purchase of potatoes
2. The use of potatoes
3. Are the variances favourable or unfavourable? Explain.

- 312) During the week, Hoster's potato chip manufacturing facility purchased 25,000 kilograms potatoes at a price of \$1.10 per kilogram. The standard price per kilogram is \$1.25. During week, 22,000 kg of potatoes were used. The standard quantity of potatoes that should have been used for the actual volume of output was 22,500 kg. 312) _____

Record the following transactions using a standard cost accounting system:

1. The purchase of potatoes
2. The use of potatoes
3. Are the variances favourable or unfavourable? Explain.

- 313) Teri's Furniture uses variance analysis to evaluate manufacturing overhead in its table fac The information for the May overhead expenditures is as follows: 313) _____

Budgeted output units	14,000 tables
Budgeted fixed manufacturing overhead	\$22,400
Budgeted variable manufacturing overhead	\$3.00 per direct labour hour
Budgeted direct manufacturing labour hours	0.2 hour per table
Fixed manufacturing costs incurred	\$24,000
Direct manufacturing labour hours used	4,000 hours
Variable manufacturing costs incurred	\$11,000
Actual units manufactured	15,000 tables

Required:

- a. Calculate the variable manufacturing overhead spending and efficiency variances; and fixed manufacturing overhead budget and volume variances.
- b. Prepare all necessary journal entries to record the actual costs, allocated costs, and variances. Keep variable and fixed cost entries separate.

Use the information below to answer the following questions:

Fred's Furniture uses variance analysis to evaluate manufacturing overhead in its table factory. The information for the May overhead expenditures is as follows:

Budgeted output units	3,000 tables
Budgeted fixed manufacturing overhead	\$23,000
Budgeted variable manufacturing overhead	\$3.50 per direct labour hour
Budgeted direct manufacturing labour hours	1.2 hour per table
Fixed manufacturing costs incurred	\$22,000
Direct manufacturing labour hours used	3,600 hours
Variable manufacturing costs incurred	\$13,000
Actual units manufactured	2,900 tables

- 314) Calculate the variable manufacturing overhead spending and efficiency variances 314) _____
- 315) Calculate the fixed manufacturing overhead budget and production volume variance 315) _____
- 316) Prepare all necessary journal entries to record the actual costs, allocated costs, and variances. Keep variable and fixed cost entries separate. 316) _____

Answer Key

Testname: UNTITLED1

- 1) TRUE
- 2) TRUE
- 3) FALSE
- 4) TRUE
- 5) FALSE
- 6) TRUE
- 7) FALSE
- 8) TRUE
- 9) FALSE
- 10) TRUE
- 11) TRUE
- 12) B
- 13) B
- 14) A
- 15) A
- 16) A

17) UNITS	50,000	60,000	70,000
Revenue at \$11.50/unit	\$ 575,000	\$ 690,000	\$ 805,000
Variable Costs \$4.50/unit	<u>\$ 225,000</u>	<u>\$ 270,000</u>	<u>\$ 315,000</u>
Contribution Margin	\$ 350,000	\$ 420,000	\$ 490,000
Fixed Costs	<u>\$ 195,000</u>	<u>\$ 195,000</u>	<u>\$ 295,000</u>
Operating Income	<u><u>\$ 155,000</u></u>	<u><u>\$ 225,000</u></u>	<u><u>\$ 195,000</u></u>

18) UNITS	<u>58,000</u>	<u>63,000</u>	<u>68,000</u>
Revenue	\$ 725,000	\$ 787,500	\$ 850,000
Variable Costs			
Cost of goods sold	\$ 377,000	\$ 409,500	\$ 442,000
Sales Commissions	\$ 72,500	\$ 78,750	\$ 85,000
Fixed Costs			
Salary	\$ 210,000	\$ 210,000	\$ 241,500
Depreciation	\$ 15,000	\$ 15,000	\$ 18,000
Rent	\$ 24,000	\$ 24,000	\$ 30,000
Utilities	<u>\$ 12,000</u>	<u>\$ 12,000</u>	<u>\$ 15,000</u>
Total Expenses	<u>\$ 710,500</u>	<u>\$ 749,250</u>	<u>\$ 831,500</u>
Operating Income	<u><u>\$ 14,500</u></u>	<u><u>\$ 38,250</u></u>	<u><u>\$ 18,500</u></u>

- 19) TRUE
- 20) TRUE
- 21) FALSE
- 22) FALSE
- 23) C
- 24) C
- 25) D
- 26) B
- 27) A

Answer Key

Testname: UNTITLED1

28) B

29) B

30) D

31) A

32) 1. Standard variable overhead rate = $(\$6,160,000 - \$2,640,000)/440,000$ machine hours = \$8.00/ machine hour

2. Standard fixed overhead rate = $\$2,640,000/440,000$ machine hours = \$6.00

3. Standard total overhead rate = $\$6,160,000/ 440,000$ machine hours = \$14.00

OR

Standard total overhead rate = standard variable overhead rate + standard fixed overhead rate = \$8.00 + \$6.00 = \$14.00

33) 1. Standard variable overhead rate = $(\$4,928,000 - \$2,112,000)/440,000$ machine hours = \$6.40/ machine hour

2. Standard fixed overhead rate = $\$2,112,000/440,000$ machine hours = \$4.80

3. Standard total overhead rate = $\$4,928,000/ 440,000$ machine hours = \$11.20

OR

Standard total overhead rate = standard variable overhead rate + standard fixed overhead rate = \$6.40 + \$4.80 = \$11.20

34) 1. Standard variable overhead rate = $(\$800,000 - \$500,000)/50,000$ machine hours = \$6.00/ machine hour

2. Standard fixed overhead rate = $\$500,000/50,000$ machine hours = \$10.00

3. Standard total overhead rate = $\$800,000/ 50,000$ machine hours = \$16.00

OR

Standard total overhead rate = standard variable overhead rate + standard fixed overhead rate = \$6.00 + \$10.00 = \$16.00

35) 1. Standard variable overhead rate = $(\$400,000 - \$300,000)/25,000$ direct labour hours = \$4.00/ direct labour hour

2. Standard fixed overhead rate = $\$300,000/25,000$ direct labour hours = \$12.00

3. Standard total overhead rate = $\$400,000/ 25,000$ direct labour hours = \$16.00

OR

Standard total overhead rate = standard variable overhead rate + standard fixed overhead rate = \$4.00 + \$12.00 = \$16.00

Total estimated direct labour:

$(100,000 \text{ cases} \times 1/4 \text{ direct labour hour}) = \underline{\underline{25,000 \text{ hours}}}$

Answer Key

Testname: UNTITLED1

36) 1. Standard variable overhead rate = $(\$640,000 - \$480,000)/80,000$ direct labour hours = \$2.00/ direct labour hour

2. Standard fixed overhead rate = $\$480,000/80,000$ direct labour hours = \$6.00

3. Standard total overhead rate = $\$640,000/80,000$ direct labour hours = \$8.00

OR

Standard total overhead rate = standard variable overhead rate + standard fixed overhead rate = \$2.00 + \$6.00 = \$8.00

Total estimated direct labour:

$(320,000 \text{ cases} \times 1/4 \text{ direct labour hour}) = \underline{80,000 \text{ hours}}$

37) 1. Standard variable overhead rate = $(\$960,000 - \$640,000)/80,000$ direct labour hours = \$4.00/ direct labour hour

2. Standard fixed overhead rate = $\$640,000/80,000$ direct labour hours = \$8.00

3. Standard total overhead rate = $\$960,000/80,000$ direct labour hours = \$12.00

OR

Standard total overhead rate = standard variable overhead rate + standard fixed overhead rate = \$4.00 + \$8.00 = \$12.00

Total estimated direct labour:

$(160,000 \text{ cases} \times 1/2 \text{ direct labour hour}) = \underline{80,000 \text{ hours}}$

38) Requirement 1:

Direct materials	250 kg × \$5.00	=	\$ 1,250.00
Direct labour	2 hrs × \$20.00	=	40.00
VMO	2 hrs × \$ 1.50	=	<u>3.00</u>
Total			<u>\$ 1,293.00</u>

Requirement 2:

Direct materials	\$ 1,250 × 0.80	=	\$ 1,000.00
Direct labour	\$ 40 × 0.90	=	36.00
VMO	\$ 3 × 0.8	=	<u>2.40</u>
Total			<u>\$ 1,038.40</u>

Requirement 3:

$\$1,293.00 - \$1,038.40 = \$ 254.60$ savings per batch

$\$360,000/\$254.60 = 1,414$ batches

Answer Key

Testname: UNTITLED1

39) Student responses will vary but should include the following points:

- A. They aid management planning by providing the unit amounts for budgeting.
- B. They aid management control by establishing expected or desired levels of operating performance. Significant var from standard amounts signal the need for management's attention.
- C. They help motivate employees by serving as benchmarks against which their performance is measured.
- D. They provide unit costs that may be useful in setting the sale price of products or services.
- E. They help simplify record keeping, which reduces clerical costs.

40) TRUE

41) FALSE

42) TRUE

43) FALSE

44) TRUE

45) FALSE

46) FALSE

47) TRUE

48) FALSE

49) TRUE

50) B

51) C

52) D

53) A

54) C

55) C

56) A

57) A

58) B

59) B

60) C

61) D

62) C

63) A

64) A

65) D

66) C

67) B

68) A

69) B

70) B

71) B

72) A

73) B

74) A

Answer Key

Testname: UNTITLED1

- 75) C
- 76) C
- 77) A
- 78) D
- 79) B
- 80) A
- 81) A
- 82) B
- 83) A
- 84) D
- 85) C
- 86) B
- 87) A
- 88) B
- 89) B
- 90) A
- 91) C
- 92) D
- 93) D
- 94) A
- 95) B
- 96) A
- 97) A
- 98) A
- 99) D
- 100) D
- 101) D
- 102) A
- 103) B
- 104) D
- 105) A
- 106) C
- 107) D
- 108) D
- 109) A
- 110) C
- 111) B
- 112) A
- 113) D
- 114) B
- 115) A
- 116) C

Answer Key

Testname: UNTITLED1

- 117) A
- 118) C
- 119) C
- 120) C
- 121) C
- 122) C
- 123) D
- 124) B
- 125) C
- 126) D
- 127) A
- 128) A
- 129) B
- 130) C
- 131) B
- 132) C
- 133) D
- 134) D
- 135)

Actual material price per kilogram	\$2.40
Standard material price per kilogram	\$2.50
Difference between actual and standard price	\$0.10
Actual production	20,000
Actual material kilograms per unit	1.25
Actual quantity of materials	25,000
Direct material price variance	\$2,500
	Favorable
Actual production	20,000
Actual material kilograms per unit	1.25
Actual quantity of materials	25,000
Actual production	20,000
Standard material kilograms per unit	1.00
Standard quantity of materials	20,000
Difference between standard quantity and actual quantity	5,000
Standard material price per kilogram	\$2.50
Direct material efficiency variance	\$12,500
	Unfavourable

Answer Key

Testname: UNTITLED1

136)

PART 1	
Direct labour efficiency variance - favourable	\$38,850
Direct labour flexible budget variancefavourable	\$700
Direct labour price variance	\$38,150
If both variances are favourable and the efficiency variance is larger than the flexible budget variance, then unfavourable, else favourable	Unfavourable
PART 2	
Standard direct labour per finished good	2.50
Actual finished goods produced	180,000
Standard quantity of direct labour for actual production	450,000
PART 3	
Direct labour efficiency variancefavourable	\$38,850
Standard direct labour cost	\$18.50
Favourable efficiency variance (input as negative) / standard direct labour cost	(2,100)
Standard quantity of direct labour for actual production	450,000
Actual hours of direct labour incurred for actual production	447,900

137)

Part 1	
Direct material price varianceunfavourable	\$13,600
Direct material flexible budget variancefavourable	\$1,200
Direct material efficiency variance	\$14,800
If the unfavourable material price variance is larger than the favourable flexible budget variance, then the material efficiency variance must be favourable.	Favourable
Part 2	
Standard amount of direct material per finished good	6.00
Actual finished goods produced	420,000
Standard quantity of direct material for actual production	2,520,000
Part 3	
Direct material efficiency variance (enter as a negative)	\$(14,800)
Standard direct material cost per kilogram	\$2.50
Variance expressed in kilograms	(5,920)
Standard quantity of direct material for actual production	2,520,000
Actual kilograms of direct material incurred for actual production	2,514,080

Answer Key

Testname: UNTITLED1

138)

Direct labour flexible budget variance (if the price and efficiency variances are both favourable, add them; if both are unfavourable, add them; if one is favourable and the other is unfavourable, then take the difference)	\$1,050
If the labour price variance is greater than the labour efficiency variance and is favourable, then the labour flexible budget will be favourable. If the labour efficiency variance is greater than the price variance and is favourable, then the flexible budget variance is favourable. If these conditions aren't met the flexible budget variance will be unfavourable.	Unfavourable
Standard labour cost	\$20,500
Direct labour flexible budget variance	\$1,050
Actual direct labour cost (if flexible budget variance is favourable, subtract variance from standard labour cost; if unfavourable, add to standard labour cost)	\$21,550

139)

Direct labour flexible budget variance (if the price and efficiency variances are both favourable, add them; if both are unfavourable, add them; if one is favourable and the other is unfavourable, then take the difference)	\$2,400
If the labour price variance is greater than the labour efficiency variance and is favourable, then the labour flexible budget will be favourable. If the labour efficiency variance is greater than the price variance and is favourable, then the flexible budget variance is favourable. If these conditions aren't met the flexible budget variance will be unfavourable.	Favourable
Actual direct labour cost	\$52,000
Direct labour flexible budget variance	\$2,400
Standard direct labour cost for actual output (if flexible budget variance is favourable, add variance to actual direct labour cost; if unfavourable, subtract from actual direct labour cost)	\$54,400

Answer Key

Testname: UNTITLED1

140)

Direct material efficiency variance	\$12,000
Standard quantity of direct material per good	2
Actual production	21,000
Standard quantity of direct material	42,000
Actual kilograms of direct material purchased and used	40,000
Difference between standard and actual	2,000
Standard price per kilogram (efficiency variance / difference between standard and actual)	\$6.00
Direct material price variance	\$8,000
Actual kilograms of direct material purchased and used	40,000
Price variance on a per kilogram basis (positive if price variance is unfavourable, negative if the price variance is favourable)	\$0.20
Actual price per kilogram (standard price per kilogram + price variance on per kilogram basis)	\$6.20

141)

Part A:		
Actual pounds of sugar used per batch of fudge	102.0	
Actual batches of fudge produced	400	
Actual pounds of sugar used per batch of fudge	40,800	
Actual cost per pound of sugar	\$2.10	
Standard cost per pound of sugar	\$(1.90)	
Difference between actual and standard cost per foot	\$ 0.20	
Actual pounds of sugar used per batch of fudge	40,800	
Materials price variance	\$8,160	unfavorable

Part B		
Standard quantity of sugar (pounds)	100	
Actual batches of fudge produced	400	
Standard materials quantity, in feet	40,000	
Actual pounds of sugar used per batch of fudge	102.0	
Actual batches of fudge produced	400	
Actual materials quantity, in feet	40,800	
Actual materials quantity, in feet	40,800	
Standard materials quantity, in feet	(40,000)	
Difference between actual and standard materials quantity	800	
Standard cost per pound of sugar	\$1.90	
Materials efficiency variance	\$1,520	unfavorable

Answer
Testna

Actual materials quantity, in feet	40,800	
Standard materials quantity, in feet	(40,000)	
Difference between actual and standard materials quantity	800	
Standard cost per pound of sugar	\$1.90	
Materials efficiency variance	\$1,520	unfavorable

Part C		
Actual direct labor hours per batch of fudge	1.8	
Actual batches of fudge produced	400	
Actual direct labor hours	720	
Standard direct labor hours per batch of fudge	2.0	
Actual batches of fudge produced	400	
Standard direct labor hours	800	
Difference between actual and standard direct labor hours	(80)	
Standard direct labor cost per hour	\$18.00	
Direct labor efficiency variance	\$1,440	favorable

Part D		
Actual direct labor hours per batch of fudge	1.8	
Actual batches of fudge produced	400	
Actual direct labor hours	720	
Standard direct labor hours per batch of fudge	2.0	
Actual batches of fudge produced	400	
Standard direct labor hours	800	
Difference between actual and standard direct labor hours	(80)	
Standard direct labor cost per hour	\$18.00	
Direct labor efficiency variance	\$1,440	favorable

142) Part A

Cost of actual Direct materials purchased and used	\$ 33,000.00
Material Price variance favourable	\$ 1,100.00
Materials used at standard price	\$ 34,100.00
Divide by standard cost per kilogram	\$ 15.50
Kilograms of material purchased and used	2,200

Part B

Cost of actual Direct materials purchased and used	\$ 33,000.00
Material Price variance (favourable)	\$ 1,100.00
Materials used at standard price	\$ 34,100.00
Divide by standard cost per kilogram	\$ 15.50
Kilograms of material purchased and used	2,200

Actual production in units	700
Standard kgs of materials per unit	3
Standard kgs of materials for actual production	2,100

Actual kgs purchased and used	2,200
Standard kgs of direct material	- 2,100
Difference	100
Standard cost per kg	\$ 15.50
Materials Efficiency variance unfavourable	\$ 1,550.00

Answer Key

Testname: UNTITLED1

Materials Efficiency variance unfavourable	\$ 1,550.00
--	-------------

Part C

Total Labour Variance unfavourable	\$ 1,075.00
Labour efficient variance unfavourable	\$ 712.50
Labour rate (price) variance unfavourable	\$ 362.50

Actual direct labour cost	\$ 21,025.00
Divide by actual direct labour hours used	1,450
Actual Direct Labour rate	\$ 14.50

Labour rate variance- unfavourable	\$ 362.50
Divide by direct labour hours used	1,450
Labour rate variance per hour	\$ 0.25
Actual direct labour rate	\$ 14.50
Standard labour rate per hour	\$ 14.25

Part D

Total labour variance - unfavourable	\$ 1,075.00
Labour efficiency variance unfavourable	\$ 712.50
Labour Rate Variance unfavourable	\$ 362.50

Actual direct labour cost incurred	\$ 21,025.00
Divide by Actual Direct Labour Hours used	1,450
Actual Direct Labour Rate	\$ 14.50

Labour rate variance- unfavourable	\$ 362.50
Divide by direct labour hours used	1,450
Labour rate variance per hour	\$ 0.25
Actual direct labour rate	\$ 14.50
Standard labour rate per hour	\$ 14.25

Labour Efficiency variance unfavourable	\$ 712.50
Divide by standard direct labour rate per hour	\$ 14.25
Efficiency variance in hours unfavourable	50
Actual Hours Used	1,450
Standard direct labour hours allowed	1,400

Answer Key

Testname: UNTITLED1

143) a.

	<u>Actual Result</u>	<u>Flexible Budget</u>	<u>Variances</u>
Direct materials	\$30,225	\$30,000	\$225U
Direct manufacturing labour	11,470	10,800	670U
Direct marketing labour	<u>5,880</u>	<u>6,000</u>	<u>120 F</u>
	<u>\$47,575</u>	<u>\$46,800</u>	<u>\$775 U</u>

b. $(\$7.75 - \$7.50) \times (3,900) = \$975$ unfavourable

c. Manufacturing Labour $(\$9.25 - \$9.00) \times 1,240 = \$310$ unfavourable

Marketing Labour $(\$2.80 - \$3.00) \times 2,100 = \$420$ favourable

d. $[3,900 - (4,000 \text{ units} \times 1.00)] \times \$7.50 = \$750$ favourable

e. Manufacturing Labour = $[1,240 \text{ hours} - (4,000 \times 0.30 \text{ hours})] \times \$9.00 = \$360$ U

Marketing Labour = $[2,100 \text{ hours} - (4,000 \times 0.50 \text{ hours})] \times \$3.00 = \$300.00$ U

144) a.

	<u>Actual Result</u>	<u>Flexible Budget</u>	<u>Variances</u>
Direct materials	\$41,625	\$47,500	\$5,875F
Direct manufacturing labour	35,125	36,000	875 F
Direct marketing labour	<u>3,080</u>	<u>2,500</u>	<u>580U</u>
	<u>\$47,575</u>	<u>\$46,800</u>	<u>\$6,170F</u>

b. $(\$9.25 - \$9.50) \times (4,500) = \$1,125$ F

c. Manufacturing Labour $(\$12.50 - \$12.00) \times 2,810 = \$1,405$ U

Marketing Labour $(\$2.80 - \$2.50) \times 1,100 = \$330$ U

d. $[4,500 - (5,000 \text{ units} \times 1.00)] \times \$9.50 = \$4,750$ F

e. Manufacturing Labour = $[2,810 \text{ hours} - (5,000 \times 0.6 \text{ hours})] \times \$12.00 = \$2,280$ F

Marketing Labour = $[1,100 \text{ hours} - (5,000 \times 0.20 \text{ hours})] \times \$2.50 = \$250$ U

145) TRUE

146) TRUE

147) FALSE

148) TRUE

149) TRUE

150) FALSE

151) B

152) B

153) B

154) C

155) C

156) B

157) C

158) A

159) A

Answer Key

Testname: UNTITLED1

160) C

161) A

162) A

163) C

164) B

165) C

166) B

167) A

168) D

169) Budgeted variable overhead per hour = $\$300,000 / (10,000 \times 1.25)$ machine-hours = \$24

Spending variance = $(\$24 - \$23.75) \times 12,100 = \$3,025$ favourable

Efficiency variance = $[12,100 - (11,000 \times 1.25)] \times \$24 = \$39,600$ favourable

170) Budgeted variable overhead per hour = $\$896,000 / 56,000$ machine hours = \$16

Spending variance = $(\$16 - \$15) \times 60,000 = \$60,000$ favourable

Efficiency variance = $(60,000 - (58,000 \times 1.0)) \times \$16 = \$32,000$ unfavourable

171) Budgeted variable overhead per hour = $\$210,000 / (20,000 \times 0.5)$ machine-hours = \$21

Spending variance = $(\$21 - \$20) \times 9,500 = \$9,500$ favourable

Efficiency variance = $[9,500 - (18,000 \times 0.5)] \times \$21 = \$10,500$ unfavourable

Answer Key

Testname: UNTITLED1

172)

Part 1	
Actual variable overhead cost	\$33,000
Actual fixed overhead costs	\$49,000
Total actual overhead	\$82,000
Standard overhead allocated to production	\$94,250
Total manufacturing overhead variance	\$12,250
	Favourable
Part 2 & 3	
Actual variable overhead cost	\$33,000
Standard variable overhead cost (13,000 × \$3)	39,000
Favourable variance	\$6,000
Actual fixed overhead costs	\$49,000
Budgeted fixed overhead	51,000
Favourable variance	\$2,000
Part 4	
FOH Budget	\$51,000
Standard overhead allocated to production (\$4.25 × 13,000)	\$55,250
Production volume variance	\$4,250
	Favourable

173)

Part 1	
Actual overhead	\$84,500
Standard overhead allocated to production	96,000
Total manufacturing overhead variance	\$11,500
	Favourable
Part 2	
Actual variable overhead	\$56,000
Flexible budget for actual production	64,000
Variable overhead flexible budget variance	\$8,000
	Favourable
Part 3	
Actual fixed overhead	\$28,500
Budgeted fixed overhead	30,000
Fixed overhead budget variance	\$1,500
	Favourable
Part 4	
Standard overhead allocated to production	\$32,000
Budget	30,000
Production volume variance	\$2,000
	Favourable

Answer Key

Testname: UNTITLED1

- 174) NOTE: Requirement 1 relates to learning objective 3. Requirement 2 can be assigned without requirement 1 if only learning objective 4 is to be tested.

Although not required, it is helpful to begin the variance computations by organizing the data:

Direct materials:

Actual price	\$6.30 / sq. m
Standard price	\$6.00 / sq. m
Actual quantity (13,600 hats × 2.7 sq. m / hat)	36,720 sq. m
Standard quantity (13,600 hats × 3.0 sq. m / hat)	40,800 sq. m

Direct labour:

Actual price (\$522,500 ÷ 27,500 hr)	\$19.00 / hr
Standard price	\$18.00 / hr
Actual quantity	27,500 hr
Standard quantity (13,600 hats × 2 hrs / hat)	27,200 hr

Now we can easily compute the variances:

Requirement 1

Price Variances:

$$\text{Price Variances:} = \left(\begin{array}{c} \text{Actual price} \\ \text{per input unit} \end{array} - \begin{array}{c} \text{Standard price} \\ \text{per input unit} \end{array} \right) \times \begin{array}{c} \text{Actual quantity} \\ \text{of input} \end{array}$$

$$\begin{aligned} \text{Direct materials} \\ \text{price variance} &= (\$6.30 \text{ per sq. m} - \$6.00 \text{ per sq. m}) \times 36,720 \text{ square metres} \\ &= \underline{\underline{\$11,016 \text{ U}}} \end{aligned}$$

$$\begin{aligned} \text{Direct labour} \\ \text{price variance} &= (\$19.00 \text{ per hour} - \$18.00 \text{ per hour}) \times 27,500 \text{ hours} \\ &= \underline{\underline{\$27,500 \text{ U}}} \end{aligned}$$

Efficiency Variances:

$$\text{Efficiency variance:} = \left(\begin{array}{c} \text{Actual quantity} \\ \text{of input} \end{array} - \begin{array}{c} \text{Standard quantity} \\ \text{of input} \end{array} \right) \times \begin{array}{c} \text{Standard price} \\ \text{per input unit} \end{array}$$

$$\begin{aligned} \text{Direct materials} \\ \text{efficiency variance} &= (36,720 \text{ sq. m} - 40,800 \text{ sq. m}) \times \$6.00 \text{ per sq. m} \\ &= \underline{\underline{\$24,480 \text{ F}}} \end{aligned}$$

$$\begin{aligned} \text{Direct labour} \\ \text{efficiency variance} &= (27,500 \text{ hours} - 27,200 \text{ hours}) \times \$18.00 \text{ per hour} \\ &= \underline{\underline{\$5,400 \text{ F}}} \end{aligned}$$

Requirement 2

Answer Key

Testname: UNTITLED1

Requirement 2

Total overhead variance:	
Actual overhead cost	\$110,500
Standard overhead allocated to (actual) production	
(13,600 × \$8.00)	<u>108,800</u>
Total overhead variance	<u>\$ 1,700 U</u>
Overhead flexible budget variance:	
Actual overhead cost	\$110,500
Flexible budget overhead for actual outputs	<u>111,000^a</u>
Overhead flexible budget variance	<u>\$ 500 F</u>
Production volume variance:	
Flexible budget overhead for actual outputs	\$111,000
Standard overhead allocated to (actual) production	<u>108,800</u>
(\$8.00 × 13,600 hats)	
Production volume variance	<u>\$ 2,200 F</u>

^a Flexible budget overhead for 13,600 hats:

Variable overhead (13,600 hats × \$2.50 / hat)	\$34,000
Fixed overhead (14,000 hats × \$5.50 / hat)	<u>77,000 *</u>
Total flexible budget overhead	<u>\$111,000</u>

*Note that to get the fixed lump-sum overhead, one must multiply the \$5.50 fixed overhead per hat by the *static budget expected outputs* of 14,000 hats.

- 175) NOTE: Requirement 1 relates to learning objective 3. Requirement 2 can be assigned without requirement 1 if only learning objective 4 is to be tested.

Although not required, it is helpful to begin the variance computations by organizing the data:

Direct materials:

Actual price (\$257,580 ÷ 48,600 sq mt)	\$5.30 / sq. m
Standard price	\$5.00 / sq. m
Actual quantity	48,600 sq. m
Standard quantity (18,000 hats × 2.5 sq. m / hat)	45,000 sq. m

Direct labour:

Actual price (\$539,000 ÷ 38,500 hr)	\$14.00 / hr
Standard price	\$15.00 / hr
Actual quantity	38,500 hr
Standard quantity (18,000 hats × 2 hrs / hat)	36,000 hr

Now we can easily compute the variances:

Requirement 1

Price Variances:

Answer Key

Testname: UNTITLED1

$$\text{Price Variances:} = \left(\begin{array}{c} \text{Actual price} \\ \text{per input unit} \end{array} - \begin{array}{c} \text{Standard price} \\ \text{per input unit} \end{array} \right) \times \begin{array}{c} \text{Actual quantity} \\ \text{of input} \end{array}$$

$$\begin{aligned} \text{Direct materials price variance} &= (\$5.30 \text{ per sq. m} - \$5.00 \text{ per sq. m}) \times 48,600 \text{ square metres} \\ &= \underline{\underline{\$14,580 \text{ U}}} \end{aligned}$$

$$\begin{aligned} \text{Direct labour price variance} &= (\$14.00 \text{ per hour} - \$15.00 \text{ per hour}) \times 38,500 \text{ hours} \\ &= \underline{\underline{\$38,500 \text{ F}}} \end{aligned}$$

Efficiency Variances:

$$\text{Efficiency variance:} = \left(\begin{array}{c} \text{Actual quantity} \\ \text{of input} \end{array} - \begin{array}{c} \text{Standard quantity} \\ \text{of input} \end{array} \right) \times \begin{array}{c} \text{Standard price} \\ \text{per input unit} \end{array}$$

$$\begin{aligned} \text{Direct materials efficiency variance} &= (48,600 \text{ sq. m} - 45,000 \text{ sq. m}) \times \$5.00 \text{ per sq. m} \\ &= \underline{\underline{\$18,000 \text{ U}}} \end{aligned}$$

$$\begin{aligned} \text{Direct labour efficiency variance} &= (38,500 \text{ hours} - 36,000 \text{ hours}) \times \$15.00 \text{ per hour} \\ &= \underline{\underline{\$37,500 \text{ U}}} \end{aligned}$$

Requirement 2

Total overhead variance:	
Actual overhead cost	\$240,000
Standard overhead allocated to (actual) production	
(18,000 × \$12.50)	<u>225,000</u>
Total overhead variance	<u>\$ 15,000 U</u>
Overhead flexible budget variance:	
Actual overhead cost	\$240,000
Flexible budget overhead for actual outputs	<u>240,000</u> ^a
Overhead flexible budget variance	<u>\$nil</u>
Production volume variance:	
Flexible budget overhead for actual outputs	\$240,000
Standard overhead allocated to (actual) production	<u>225,000</u>
(\$12.50 × 18,000 hats)	
Production volume variance	<u>\$ 15,000 U</u>

^a Flexible budget overhead for 18,000 hats:

Variable overhead (18,000 hats × \$5.00 / hat)	\$90,000
Fixed overhead (20,000 hats × \$7.50 / hat)	<u>150,000</u> *

Answer Key

Testname: UNTITLED1

Fixed overhead (20,000 hats × \$7.50 / hat)	<u>150,000 *</u>
Total flexible budget overhead	<u>\$240,000</u>

*Note that to get the fixed lump-sum overhead, one must multiply the \$7.50 fixed overhead per hat by the *static budget expected outputs* of 20,000 hats.

- 176) NOTE: Requirement 1 relates to learning objective 4. Requirement 2 can be assigned without requirement 1 if only learning objective 5 is to be tested.

Although not required, it is helpful to begin the variance computations by organizing the data:

Direct materials:

Actual price	\$4.90 / sq. m
Standard price	\$5.00 / sq. m
Actual quantity (22,000 hats × 2.7 sq. m / hat)	59,400 sq. m
Standard quantity (22,000 hats × 2.5 sq. m / hat)	55,000 sq. m

Direct labour:

Actual price (\$659,750 ÷ 45,500 hr)	\$14.50 / hr
Standard price	\$15.00 / hr
Actual quantity	45,500 hr
Standard quantity (22,000 hats × 2 hrs / hat)	44,000 hr

Now we can easily compute the variances:

Requirement 1

Price Variances:

$$\text{Price Variances:} = \left(\begin{array}{c} \text{Actual price} \\ \text{per input unit} \end{array} - \begin{array}{c} \text{Standard price} \\ \text{per input unit} \end{array} \right) \times \begin{array}{c} \text{Actual quantity} \\ \text{of input} \end{array}$$

$$\begin{aligned} \text{Direct materials} &= (\$4.90 \text{ per sq m} - \$5.00 \text{ per sq. m}) \times 59,400 \text{ square metres} \\ \text{price variance} &= \underline{\underline{\$5,940 \text{ F}}} \end{aligned}$$

$$\begin{aligned} \text{Direct labour} &= (\$14.50 \text{ per hour} - \$15.00 \text{ per hour}) \times 45,500 \text{ hours} \\ \text{price variance} &= \underline{\underline{\$22,750\text{F}}} \end{aligned}$$

Efficiency Variances:

$$\text{Efficiency variance:} = \left(\begin{array}{c} \text{Actual quantity} \\ \text{of input} \end{array} - \begin{array}{c} \text{Standard quantity} \\ \text{of input} \end{array} \right) \times \begin{array}{c} \text{Standard price} \\ \text{per input unit} \end{array}$$

$$\begin{aligned} \text{Direct materials} &= (59,400 \text{ sq. m} - 55,000 \text{ sq. m}) \times \$5.00 \text{ per sq. m} \\ \text{efficiency variance} &= \underline{\underline{\$22,000 \text{ U}}} \end{aligned}$$

Answer Key

Testname: UNTITLED1

$$\begin{aligned}\text{Direct labour efficiency variance} &= (45,500 \text{ hours} - 44,000 \text{ hours}) \times \$15.00 \text{ per hour} \\ &= \underline{\underline{\$22,500 \text{ U}}}\end{aligned}$$

Requirement 2

Total overhead variance:	
Actual overhead cost	\$290,000
Standard overhead allocated to (actual) production	
(22,000 × \$12.50)	<u>275,000</u>
Total overhead variance	<u>\$ 15,000 U</u>
Overhead flexible budget variance:	
Actual overhead cost	\$290,000
Flexible budget overhead for actual outputs	<u>260,000^a</u>
Overhead flexible budget variance	<u>\$30,000 U</u>
Production volume variance:	
Flexible budget overhead for actual outputs	\$260,000
Standard overhead allocated to (actual) production	<u>275,000</u>
(12.50 × 18,000 hats)	
Production volume variance	<u>\$ 15,000 F</u>

^a Flexible budget overhead for 22,000 hats:

Variable overhead (22,000 hats × \$5.00 / hat)	\$110,000
Fixed overhead (20,000 hats × \$7.50 / hat)	<u>150,000[*]</u>
Total flexible budget overhead	<u>\$260,000</u>

*Note that to get the fixed lump-sum overhead, one must multiply the \$7.50 fixed overhead per hat by the *static budget expected outputs* of 20,000 hats.

177) Variable overhead spending variance = \$260,400 - (4,200 × \$65) = \$12,600 favourable
\$650/10 hours = \$65

Variable overhead efficiency variance = \$65 × (4,200 - (400 × 10)) = \$13,000 unfavourable

Fixed overhead budget variance = \$32,300 - \$29,400 = \$2,900 unfavourable

Fixed overhead volume variance = \$29,400 - (400 × \$70) = \$1,400 unfavourable
\$29,400/(420 units × 10 hours) = \$7

178) Variable overhead spending variance = \$35,600 - (7,200 × \$5) = \$400 favourable

Variable overhead efficiency variance = \$5 × (7,200 - 6,800) = \$2,000 unfavourable
3,400 units × 2 hours

Fixed overhead budget variance = \$23,000 - \$20,000 = \$3,000 unfavourable

Fixed overhead volume variance = \$20,000 - (3,400 × 2 × \$3.125) = \$1,250 favourable
\$20,000/(3,200 units × 2 hours) = \$3.125

Answer Key

Testname: UNTITLED1

- 179) a. Yes, the variable overhead efficiency variance can be computed the same way as the efficiency variance for direct-items.
b. No, the interpretations are different. The variable overhead efficiency variance focuses on the quantity of allocation used, while the efficiency variance for direct-cost items focuses on the quantity of materials and labour-hours used.
- 180) A
181) C
182) D
183) B
184) D
185) FALSE
186) FALSE
187) FALSE
188) TRUE
189) TRUE
190) TRUE
191) FALSE
192) FALSE
193) A
194) B
195) D
196) D
197) C
198) D
199) C
200) D
201) D
202) B
203) B
204) A
205) B
206) A
207) B
208) A
209) A
210) A

Answer Key

Testname: UNTITLED1

211)

	Flexible Budget Formula per Unit	Flexible Budget for Various Levels of Volume		
Units		8,000	9,000	10,000
Sales revenue	\$20.00	\$160,000	\$180,000	\$200,000
Variable expenses	\$6.00	\$48,000	\$54,000	\$60,000
Fixed expenses		\$75,000	\$75,000	\$75,000
Total expenses		\$123,000	\$129,000	\$135,000
Operating income		\$37,000	\$51,000	\$65,000

212)

	Flexible Budget Formula per Unit	Flexible Budget for Various Levels of Volume		
Units		12,000	18,000	25,000
Sales revenue	\$10.00	\$120,000	\$180,000	\$250,000
Variable expenses	\$2.00	\$24,000	\$36,000	\$50,000
Fixed expenses		\$52,000	\$78,000	\$78,000
Total expenses		\$76,000	\$114,000	\$128,000
Operating income		\$44,000	\$66,000	\$122,000

213) \$44,500

214)

GoTray Inc.
Flexible Budget Income Statement
Month Ended January 31

	Per Unit	5,500	6,000	6,500
Sales revenue		\$16,500	\$18,000	\$19,500
Variable expenses:				
Cost of goods sold		6,325	6,900	\$7,475
Sales commissions		1,375	1,500	1,625
Utilities expense		1,100	1,200	1,300
Total variable expenses		\$8,800	\$9,600	\$10,400
Fixed expenses:				
Salary expense		\$3,250	\$3,250	\$3,900
Depreciation expense		2,000	2,000	2,300
Rent expense		1,000	1,000	1,800
Utilities expense		500	500	800
Total fixed expenses		\$6,750	\$6,750	\$8,800
Operating income		\$950	\$1,650	\$300

Answer Key

Testname: UNTITLED1

215)

SnoGo Inc.
Flexible Budget Income Statement
Month Ended January 31

	Per Unit	50,000	60,000	70,000
Sales revenue	\$1.00	\$50,000	\$60,000	\$70,000
Variable expenses:				
Cost of goods sold	0.40	\$20,000	\$24,000	\$28,000
Sales commissions	0.10	5,000	6,000	7,000
Utilities expense	0.05	2,500	3,000	3,500
Total variable expenses		\$27,500	\$33,000	\$38,500
Fixed expenses:				
Salary expense		\$1,000	\$1,000	\$1,150
Depreciation expense		750	750	825
Rent expense		500	500	775
Utilities expense		250	250	250
Total fixed expenses		\$2,500	\$2,500	\$3,000
Operating income		\$20,000	\$24,500	\$28,500

216)

SnoGo Inc.
Flexible Budget Income Statement
Month Ended January 31

	Per Unit	5,500	6,000	6,500
Sales revenue	\$15.00	\$82,500	\$90,000	\$97,500
Variable expenses:				
Cost of goods sold	5.75	\$31,625	\$34,500	\$37,375
Sales commissions	1.25	6,875	7,500	8,125
Utilities expense	1.00	5,500	6,000	6,500
Total variable expenses		\$44,000	\$48,000	\$52,000
Fixed expenses:				
Salary expense		\$15,000	\$15,000	\$16,500
Depreciation expense		10,000	10,000	12,000
Rent expense		5,000	5,000	6,500
Utilities expense		2,500	2,500	3,000
Total fixed expenses		\$32,500	\$32,500	\$38,000
Operating income		\$6,000	\$9,500	\$7,500

Answer Key

Testname: UNTITLED1

217)

SnoGo Inc.
Flexible Budget Income Statement
Month Ended January 31

	Per Unit	11,000	12,000	13,000
Sales revenue	\$30.00	\$330,000	\$360,000	\$390,000
Variable expenses:				
Cost of goods sold	5.75	\$63,250	\$69,000	\$74,750
Sales commissions	2.50	27,500	30,000	32,500
Utilities expense	2.00	22,000	24,000	26,000
Total variable expenses		\$112,750	\$123,000	\$133,250
Fixed expenses:				
Salary expense		\$30,000	\$30,000	\$33,000
Depreciation expense		25,000	25,000	28,750
Rent expense		10,000	10,000	11,500
Utilities expense		5,000	5,000	5,000
Total fixed expenses		\$70,000	\$70,000	\$78,250
Operating income		\$147,250	\$167,000	\$178,500

218)

SnoGo Inc.
Flexible Budget Income Statement
Month Ended January 31

	Per Unit	11,000	12,000	13,000
Sales revenue	\$45.00	\$495,000	\$540,000	\$585,000
Variable expenses:				
Cost of goods sold	11.00	\$121,000	\$132,000	\$143,000
Sales commissions	6.00	66,000	72,000	78,000
Utilities expense	3.50	38,500	42,000	45,500
Total variable expenses		\$225,500	\$246,000	\$266,500
Fixed expenses:				
Salary expense		\$50,000	\$50,000	\$55,000
Depreciation expense		40,000	40,000	46,000
Rent expense		15,000	15,000	16,500
Utilities expense		7,500	7,500	7,500
Total fixed expenses		\$112,500	\$112,500	\$125,000
Operating income		\$157,000	\$181,500	\$193,500

219)

	Actual Results	Static Budget	Static-budget Variance
Units sold	<u>200,000</u>	<u>203,000</u>	
Revenues	\$4,000,000	\$4,263,000	\$263,000 U
Variable costs	<u>1,250,000</u>	<u>1,500,000</u>	<u>250,000</u> F
Contribution margin	\$2,750,000	\$2,763,000	13,000 U
Fixed costs	<u>875,000</u>	<u>900,000</u>	<u>25,000</u> F
Operating income	<u>\$1,875,000</u>	<u>\$1,863,000</u>	<u>\$12,000</u> F

220) D

Answer Key

Testname: UNTITLED1

- 221) A
- 222) C
- 223) E
- 224) F
- 225) G
- 226) B
- 227) D
- 228) C
- 229) B
- 230) A
- 231) TRUE
- 232) FALSE
- 233) TRUE
- 234) FALSE
- 235) FALSE
- 236) FALSE
- 237) TRUE
- 238) FALSE
- 239) B
- 240) C
- 241) D
- 242) A
- 243) C
- 244) D
- 245) D
- 246) D
- 247) C
- 248) C
- 249) D
- 250) B
- 251) C
- 252) C
- 253) D
- 254) D
- 255) D
- 256) A
- 257) D
- 258) C
- 259) A
- 260) D
- 261) D
- 262) B

Answer Key

Testname: UNTITLED1

263) A

264) 1. A

2. B

3. F

4. E

5. D

265)

Product	Actual Results at Actual Sales Price	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static Budget
Deluxe cage	\$2,835	\$135 U	\$2,970	\$220 F	\$2,750
Regular cage	\$4,802	\$294 U	\$5,096	\$624 U	\$5,720
Total	\$7,637	\$429 U	\$8,066	\$404 U	\$8,470

266)

The Flashlight Company
Income Statement Performance Report
Year Ended December 31

	Actual Results at Actual Prices	Flexible Budget Variances	Flexible Budget for Actual Volume Achieved	Sales Volume Variances	Static (Master) Budget
Output	15,000	0	15,000	3,000	12,000
Sales revenue	\$240,000	\$15,000 F	\$225,000	\$45,000 F	\$180,000
Variable expenses	\$180,000	\$30,000 U	\$150,000	\$30,000 U	\$120,000
Fixed expenses	\$48,000	\$2,000 F	\$50,000	0	\$50,000
Total expenses	\$228,000	\$28,000 U	\$200,000	\$30,000 U	\$170,000
Operating income	\$12,000	\$13,000 U	\$25,000	\$15,000 F	\$10,000

Answer Key

Testname: UNTITLED1

267)

Breezy Fan Company
Income Statement Performance Report
Year Ended December 31

	Actual Results at Actual Prices	Flexible Budget Variances	Flexible Budget for Actual Volume Achieved	Sales Volume Variances	Static (Master) Budget
Output	22,000	0	22,000	3,000 F	20,000
Sales revenue	\$363,000	\$11,000 F	\$352,000	\$32,000 F	\$320,000
Variable expenses	143,000	11,000 U	132,000	12,000 U	120,000
Fixed expenses	78,400	3,400 U	75,000	0	75,000
Total expenses	221,400	14,400 U	207,000	12,000 U	195,000
Operating income	\$141,600	\$3,400 U	\$145,000	\$20,000 F	\$125,000

268)

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static (Master) Budget
Output units	18,000	--0--	18,000	2,000 F	16,000
Sales revenue	\$108,000	--0--	\$108,000	\$12,000 F	\$96,000
Variable expenses	42,000	1,500 U	40,500	4,500 U	36,000
Fixed expenses	53,000	3,000 U	50,000	--- 0 ---	50,000
Total expenses	95,000	4,500 U	90,500	4,500 U	86,000
Operating income	\$13,000	4,500 U	\$17,500	\$7,500 F	\$10,000

Marketing personnel may deserve praise for selling more than expected per the master budget. However, if marketing involved in setting the budget they may be questioned for not doing so more accurately. Production personnel may be questioned for incurring more variable expenses than the flexible budget allows for the actual number of outputs and incurring more than the budgeted amount of fixed expenses. However, if the cost overruns were a result of inaccurate budgeting the responsibility may not lie with the production personnel.

269)

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static (Master) Budget
Output units	27,000	---0---	27,000	3,000F	24,000
Sales revenue	\$162,000	---0---	\$162,000	\$ 18,000 F	\$144,000
Variable expenses	63,000	2,250 U	60,750	6,750 U	54,000
Fixed expenses	79,500	4,500 U	75,000	--- 0 ---	75,000
Total expenses	142,500	6,750 U	135,750	6,750 U	129,000
Operating income	\$ 19,500	6,750 U	\$ 26,250	\$ 11,250 F	\$15,000

Marketing personnel may deserve praise for selling more than expected per the master budget. However, if marketing involved in setting the budget they may be questioned for not doing so more accurately. Production personnel may be questioned for incurring more variable expenses than the flexible budget allows for the actual number of outputs and incurring more than the budgeted amount of fixed expenses. However, if the cost overruns were a result of inaccurate budgeting the responsibility may not lie with the production personnel.

270)

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static (Master) Budget
Output units	19,000	---0---	19,000	1,000 F	18,000
Sales revenue	\$109,500	\$---0---	\$109,500	\$12,000 F	\$97,500
Variable expenses	40,500	500 U	40,000	5,000 U	35,000
Fixed expenses	53,500	3,500 U	50,000	--- 0 ---	50,000
Total expenses	94,000	4,000 U	90,000	5,000 U	85,000
Operating income	\$15,500	\$4,000 U	\$19,500	\$7,000 F	\$12,500

Marketing personnel may deserve praise for selling more than expected per the master budget. However, if marketing involved in setting the budget they may be questioned for not doing so more accurately. Production personnel may be questioned for incurring more variable expenses than the flexible budget allows for the actual number of outputs and incurring more than the budgeted amount of fixed expenses. However, if the cost overruns were a result of inaccurate budgeting the responsibility may not lie with the production personnel.

271)

TUFF STUFF COMPANY
Income Statement Performance Report
Year Ended January 31

	Actual Results at Actual prices	Flexible Budget Variance	Flexible Budget for Actual Number of Output Units	Sales Volume Variance	Static (Master) Budget
Output units	57,000	---0---	57,000	3,500 F	53,500
Sales revenue	\$328,500	\$15,000 F	\$313,500	\$19,250 F	\$294,250
Variable expenses	121,500	1,800 U	119,700	7,350 U	112,350
Fixed expenses	160,500	10,500 U	150,000	--- 0 ---	150,000
Total expenses	282,000	12,300 U	269,700	7,350 U	262,350
Operating income	\$46,500	\$2,700 U	43,800	11,900 F	\$31,900

Marketing personnel may deserve praise for selling more than expected per the master budget and for selling at a high price than budgeted. However, if marketing was involved in setting the budget they may be questioned for not doing more accurately. Production personnel may be questioned for incurring more variable expenses than the flexible budget allows for the actual number of outputs and for incurring more than the budgeted amount of fixed expenses. However, the cost overruns were a result of inaccurate budgeting the responsibility may not lie with the production personnel.

272) A. Flexible budget variance – the difference between actual results and the flexible budget for the actual number of output units.

B. Sales volume variance – the difference between the flexible budget and static master budget.

C. 50,000 units (the flexible budget is always prepared for the actual number of output units)

D. 470,000 (since the variance is favourable, actual revenue is higher than the flexible budget by \$10,000)

E. \$312,500 calculated as follows:

$$\$375,000 \div 60,000 = \$6.25 \text{ per unit variable cost} \times 50,000 \text{ units} = \$312,500$$

F. \$10,000 F – The actual and budgeted volumes fall in the same relevant range. Therefore the flexible budgeted fixed costs would be \$40,000. Since actual fixed costs are \$30,000, the variance is a \$10,000 F.

273) A. Flexible budget variance – the difference between actual results and the flexible budget for the actual number of output units.

B. Sales volume variance – the difference between the flexible budget and static master budget.

C. 40,000 units (the flexible budget is always prepared for the actual number of output units)

D. 312,000 (since the variance is favourable, actual revenue is higher than the flexible budget by \$8,000)

E. \$312,500 calculated as follows:

$$\$300,000 \div 48,000 = \$6.25 \text{ per unit variable cost} \times 40,000 \text{ units} = \$250,000$$

F. \$8,000 F – The actual and budgeted volumes fall in the same relevant range. Therefore the flexible budgeted fixed costs would be \$32,000. Since actual fixed costs are \$24,000, the variance is a \$8,000 F.

Answer Key

Testname: UNTITLED1

- 274) A. Flexible budget variance – the difference between actual results and the flexible budget for the actual number of output units
 B. Sales volume variance – the difference between the flexible budget and static master budget
 C. 13,000 units (the flexible budget is always prepared for the actual number of output units)
 D. \$122,850 (since the variance is favourable, actual revenue is higher than the flexible budget by \$2,650)
 E. \$79,950 calculated as follows:
 $\$95,325 \div 15,500 = \6.15 per unit variable cost $\times 13,000$ units = \$79,950
 F. \$4,000 F – The actual and budgeted volumes fall in the same relevant range. Therefore the flexible budgeted fixed costs would be \$11,500. Since actual fixed costs are \$7,500 the variance is a \$4,000 F.
- 275) A. Flexible budget variance – the difference between actual results and the flexible budget for the actual number of output units
 B. Sales volume variance – the difference between the flexible budget and static master budget
 C. 39,000 units (the flexible budget is always prepared for the actual number of output units)
 D. \$368,550 (since the variance is favourable, actual revenue is higher than the flexible budget by \$7,950)
 E. \$239,850 calculated as follows:
 $\$285,975 \div 46,500 = \6.15 per unit variable cost $\times 39,000$ units = \$239,850
 F. \$12,000 F – The actual and budgeted volumes fall in the same relevant range. Therefore the flexible budgeted fixed costs would be \$34,500. Since actual fixed costs are \$22,500 the variance is a \$12,000 F.

276) Whistler Table Company Variance Analysis

	Actual Results	Flexible Variances	Flexible Budget	Sales Volume Variances	Static Budget
Units sold	21,000		21,000		20,000
Sales	\$3,234,000	\$84,000F	\$3,150,000	\$150,000F	\$3,000,000
Var. costs	1,890,000	84,000F	1,974,000	94,000U	1,880,000
Cont. margin	\$1,344,000	\$168,000F	\$1,176,000	\$56,000F	\$1,120,000
Fixed costs	870,000	30,000F	900,000		900,000
Oper. Income	\$474,000	\$198,000F	\$276,000	\$56,000F	\$220,000

Total flexible budget variance = \$198,000 favourable.

Total sales-volume variance = \$36,000 favourable.

Answer Key

Testname: UNTITLED1

277)

Bach Table Company Variance Analysis

	Actual Results	Flexible Variances	Flexible Budget	Sales- Volume Variances	Static Budget
Units sold	<u>42,000</u>		<u>42,000</u>		<u>40,000</u>
Sales	\$2,268,000	\$168,000F	\$2,100,000	\$100,000F	\$2,000,000
Variable costs	<u>1,386,000</u>	<u>126,000</u> U	<u>1,260,000</u>	<u>60,000</u> U	<u>1,200,000</u>
Contribution margin	\$882,000	\$42,000F	\$840,000	\$40,000F	\$800,000
Fixed costs	<u>550,000</u>	<u>50,000</u> U	<u>500,000</u>	<u>0</u>	<u>500,000</u>
Operating income	<u>\$332,000</u>	<u>\$ 8,000</u> U	<u>\$340,000</u>	<u>\$40,000</u> F	<u>\$300,000</u>

Total flexible-budget variance = \$8,000 unfavourable.

Total sales-volume variance = \$40,000 favourable.

278) A static budget is one based on the level of output planned at the start of the budget period. A flexible budget calculates budgeted revenue and budgeted costs based on the actual output in the budget period. The only difference between the static budget and the flexible budget is that the static budget is prepared for the planned output, whereas the flexible budget is prepared based on the actual output.

A static budget variance is the difference between the actual results and the corresponding budgeted amounts in the static budget. A flexible-budget variance is the difference between an actual result and the corresponding flexible-budget amount based on the actual output in the budget period.

279) B

280) C

281) A

282) B

283) A

284) C

285) FALSE

286) FALSE

287) FALSE

288) FALSE

289) TRUE

290) TRUE

291) FALSE

292) D

293) C

294) D

295) D

296) B

297) A

298) A

Answer Key

Testname: UNTITLED1

299) D

300) D

301) B

302) D

303) A

304) B

305)

Freeport Enterprises
Standard Cost Income Statement
Year Ended December 31

Sales revenue		\$312,000
Cost of goods sold at standard cost	\$180,000	
Manufacturing cost variances:		
Direct materials price variance	\$(3,900)	
Direct materials efficiency variance	800	
Direct labour price variance	2,200	
Direct labour efficiency variance	(800)	
Overhead flexible budget variance	(1,850)	
Production volume variance	200	
Cost of goods sold at actual cost		176,750
Gross margin		\$135,250
Selling and administrative expenses		72,000
Operating income		\$63,250

306)

Date	Accounts	Debit	Credit
	Raw Materials Inventory	45,562.50	
	Accounts Payable		45,000.00
	Direct Materials Price Variance		562.50
	Work in Process Inventory	43,740.00	
	Direct Materials Efficiency Variance	1,822.50	
	Raw Materials Inventory		45,562.50

307)

Date	Accounts	Debit	Credit
	Work in Process Inventory	18,000.00	
	Direct Labour Efficiency Variance	2,160.00	
	Direct Labour Price Variance		1,260.00
	Wages Payable		18,900.00

Answer Key

Testname: UNTITLED1

308)

Date	Accounts	Debit	Credit
	Work in Process Inventory	10,800.00	
	Manufacturing Overhead		10,800.00
	Overhead Flexible Budget Variance	900.00	
	Production Volume Variance		700.00
	Manufacturing Overhead		200.00

309) Requirements 1 & 2:

Journal				
DATE	ACCOUNTS AND EXPLANATIONS	POST. REF.	DEBIT	CREDIT
	Raw Materials Inventory (20,000 kg × \$1.25)		25,000	
	Direct Materials Price Variance		3,000	
	Accounts Payable (20,000 kg × \$1.40)			28,000
	<i>To record the purchase of raw materials.</i>			
	Work in Process Inventory (19,200 kg × \$1.25)		24,000	
	Direct Materials Efficiency Variance		375	
	Raw Materials Inventory (19,500 kg × \$1.25)			24,375
	<i>To record the use of raw materials.</i>			

Requirement 3:

Both the direct materials price variance and efficiency variance are unfavourable. We can tell this because the variance accounts were debited. Also, we see that Hoster's paid more per kilogram than the standard cost. They also used more kilograms of potatoes than the standard allowed for the actual production volume.

310) Requirements 1 & 2:

Journal				
DATE	ACCOUNTS AND EXPLANATIONS	POST. REF.	DEBIT	CREDIT
	Raw Materials Inventory (30,000 kg × \$1.25)		37,500	
	Direct Materials Price Variance		4,500	
	Accounts Payable (30,000 kg × \$1.40)			42,000
	<i>To record the purchase of raw materials.</i>			
	Work in Process Inventory (26,000 kg × \$1.25)		32,500	
	Direct Materials Efficiency Variance		1,875	
	Raw Materials Inventory (27,500 kg × \$1.25)			34,375
	<i>To record the use of raw materials.</i>			

Requirement 3:

Both the direct materials price variance and efficiency variance are unfavourable. We can tell this because the variance accounts were debited. Also, we see that Hoster's paid more per kilogram than the standard cost. They also used more kilograms of potatoes than the standard allowed for the actual production volume.

Answer Key

Testname: UNTITLED1

311) Requirements 1 & 2:

<i>Journal</i>				
DATE	ACCOUNTS AND EXPLANATIONS	POST. REF.	DEBIT	CREDIT
	Raw Materials Inventory (30,000 kg × \$1.25)		42,000	
	Direct Materials Price Variance			4,500
	Accounts Payable (30,000 kg × \$1.25)			37,500
	<i>To record the purchase of raw materials.</i>			
	Work in Process Inventory (26,500 kg × \$1.40)		37,100	
	Direct Materials Efficiency Variance			700
	Raw Materials Inventory (26,000 kg × \$1.40)			36,400
	<i>To record the use of raw materials.</i>			

Requirement 3:

Both the direct materials price variance and efficiency variance are favourable. We can tell this because the variance accounts were credited. Also, we see that Hoster's paid less per kilogram than the standard cost. They also used fewer kilograms of potatoes than the standard allowed for the actual production volume.

312) Requirements 1 & 2:

<i>Journal</i>				
DATE	ACCOUNTS AND EXPLANATIONS	POST. REF.	DEBIT	CREDIT
	Raw Materials Inventory (25,000 kg × \$1.25)		31,250	
	Direct Materials Price Variance			3,750
	Accounts Payable (25,000 kg × \$1.10)			27,500
	<i>To record the purchase of raw materials.</i>			
	Work in Process Inventory (22,500 kg × \$1.25)		28,125	
	Direct Materials Efficiency Variance			625
	Raw Materials Inventory (22,000 kg × \$1.25)			27,500
	<i>To record the use of raw materials.</i>			

Requirement 3:

Both the direct materials price variance and efficiency variance are favourable. We can tell this because the variance accounts were credited. Also, we see that Hoster's paid less per kilogram than the standard cost. They also used fewer kilograms of potatoes than the standard allowed for the actual production volume.

Answer Key

Testname: UNTITLED1

313) a. Variances

Variable overhead spending variance = $\$11,000 - (4,000 \times \$3) = \$1,000$ favourable

Variable overhead efficiency variance = $\$3 \times (4,000 - 3,000) = \$3,000$ unfavourable
 $15,000 \text{ units} \times 0.2 \text{ hours} = 3,000$

Fixed overhead budget variance = $\$24,000 - \$22,400 = \$1,600$ unfavourable

Fixed OH production-volume variance = $\$22,400 - (15,000 \times 0.2 \times \$8) = \$1,600$ favourable

$\$22,400 / (14,000 \text{ units} \times 0.2 \text{ hours}) = \8

b. Journal entries

Manufacturing Overhead (Variable)	11,000	
Account Payable and other accounts		11,000
To record actual variable construction overhead.		

Manufacturing Overhead (Fixed)	24,000	
Accumulated Amortization, etc.		24,000
To record actual fixed construction overhead.		

Work-in-Process Control	9,000	
Manufacturing Overhead (Variable)		9,000
To record allocation of variable manufacturing overhead costs; $3,000 \times \$3$		

Work-in-Process Control	24,000	
Manufacturing Overhead (Fixed)		24,000
To record allocation of fixed manufacturing overhead costs: $15,000 \times 0.2 \times \8		

Variable Overhead Efficiency Variance	3,000	
Variable Overhead Spending Variance		1,000
Manufacturing Overhead (Variable)		2,000
To record variances for the period.		

Fixed Overhead Budget Variance	1,600	
Fixed Overhead Volume Overhead Variance		1,600
To record variances for the period.		

314) Variable overhead spending variance = $\$13,000 - (3,600 \times \$3.50) = \$400$ unfavourable
 Variable overhead efficiency variance = $\$3.50 \times (3,600 - 3,480) = \420 unfavourable
 $2,900 \text{ units} \times 1.2 \text{ hours} = 3,480$

315) Fixed overhead budget variance = $\$22,000 - \$23,000 = \$1,000$ favourable
 Fixed OH production-volume variance = $\$23,000 - (2,900 \times 1.2 \times \$6.39) = \$762.80$ unfavourable
 $\$23,000 / (3,000 \text{ units} \times 1.2 \text{ hours}) = \6.39 per hour

Answer Key

Testname: UNTITLED1

316) Manufacturing Overhead (Variable)	13,000	
Account Payable and other accounts		13,000
To record actual variable overhead.		
Manufacturing Overhead (Fixed)	22,000	
Accumulated Amortization, etc.		22,000
To record actual fixed overhead.		
Work-in-Process Control	12,600	
Manufacturing Overhead (Variable)		12,600
To record allocation of variable manufacturing overhead costs; 3,600 × \$3.50		
Work-in-Process Control	22,237	
Manufacturing Overhead (Fixed)		22,237
To record allocation of fixed manufacturing overhead costs: 2,900 × 1.2 × \$6.39		
Variable Overhead Efficiency Variance	420	
Variable Overhead Spending Variance	400	
Manufacturing Overhead (Variable)		820
To record variances for the period.		
Manufacturing Overhead (Fixed)	237.20	
Fixed Overhead Volume Overhead Variance	762.80	
Fixed Overhead Budget Variance		1,000
To record variances for the period.		