

THE TRAINING PLACE OF EXCELLENCE

Financial Performance

Practice Assessment: Questions

1. The budgeted and actual results for the month of June 20X1 are as follows:

	Budget		Actual	
Production (units of Melo)		15,000		16,500
Direct Materials	22,800 litres	£59,280	23,100 litres	£62,370
Direct Labour	6,750 hours	£60,750	8,250 hours	£70,125
Fixed overheads (absorbed on a unit basis)		£70,000		£72,500
Total		£190,030		£204,995

Complete the following sentences:

The standard quantity of labour per unit is _____ minutes.

The budgeted quantity of materials needed to produce 16,500 units of Melo is _____ litres.

The budgeted labour hours to produce 20,000 units of Melo is _____ hours.

The budgeted labour cost to produce 16,500 units of Melo is £_____.

The budgeted overhead absorption rate per unit is £_____.

b. Compute the total material, total direct labour and total fixed overhead variances.

c. A company budgeted to produce 17,500 units with fixed production costs of £283,850. The actual volume of production was 18,100 units and the actual fixed costs were £290,800.

The fixed production overheads were _____ by £_____

Choose from: under absorbed OR over absorbed

2. A company purchases 4,500 kilograms of material at a cost of £13,950. The total material price variance is £1,125 favourable.

Complete the following statement.

The standard cost per kilogram is £_____.

b. A company purchases and uses 101,400 litres of material at a cost of £329,550. The budgeted production was 20,000 units which requires 112,000 litres of material at a total standard cost of £347,200. The actual production was 19,500 units.

Complete the following statement.

The material usage variance is £_____ adverse/favourable.

c. A company expects to produce 9,000 units of its product using 7,200 hours of labour. The standard cost of labour is £12.50 per hour. The actual output was 8,050 units, 3,900 hours of labour were worked and 4,025 hours were paid at a total cost of £47,495.

Complete the following statement.

The total labour efficiency variance is £_____ adverse/favourable

The idle time variance is £_____ adverse/favourable

3. Bert manufactures product RPB. Bert operates a standard cost system in which production overheads are fixed and absorbed on a unit basis. The budgeted activity is for the production of 20,000 units at a total fixed production cost of £166,000. The actual volume of production was 24,000 units and the fixed overhead expenditure variance was £16,480 adverse.

Complete the following sentences.

The fixed overhead volume variance is £_____ adverse/favourable

The actual fixed production overheads incurred were £_____

b. Ernie manufactures product AUE. Below is the budgeted and actual results for the month:

	Budget	Actual
Production units (AUE)	12,000	14,000
Direct labour costs	£201,600	£273,000
Fixed overheads	£93,600	£113,750

Overheads are absorbed on a labour hour basis and the budget uses 14,400 labour hours.

The actual labour hours used to produce 14,000 units totalled 18,200 labour hours.

Calculate the following variances.

Variance	Amount (£)	Adverse/Favourable
Fixed overhead capacity		
Fixed overhead efficiency		

4. The following budgetary control report has been provided together with the variance calculated below:

	Budget		Actual		Variance	Amount
	Production(units)		1,100		1,240	
Direct Materials	5,280 litres	£14,784	5,800 litres	£17,100		
Direct Labour	2,750 hrs	£23,375	3,280 hrs	£27,060		
Fixed Overheads		£4,400		£4,650		
Total cost		£42,559		£48,810		
					Direct material price	£860A
					Direct materials usage	£425.60
					Direct labour rate	£820
					Direct labour efficiency	£1,530A
					Fixed overhead expenditure	£250

The company normally prepares an operating statement under standard absorption costing principles but the financial director has asked you to prepare one under standard marginal costing principles.

Put the variances into the appropriate columns and complete the table.

Budgeted variable cost for actual production			£
Budgeted fixed cost			£
Total budgeted cost for actual production			£
Variance:	Favourable	Adverse	
Direct materials price			
Direct materials usage			
Direct labour rate			
Direct labour efficiency			
Fixed overhead expenditure			
Fixed overhead volume			
Total variance	£	£	£
Actual cost of actual production			£

b. A company has a budgeted overhead absorption rate of £29 per unit and budgeted production of 13,200 units. The actual production was 11,900 units and the actual overheads incurred were £351,050.

Complete the following statement.

The over absorption/under absorption of overheads is £ _____.

5. Bill operates a standard costing system and uses raw material Aly. The standard price was set based upon a market price of £273 per litre when the material price index for Aly was 130.0. The following information has been gathered:

- The price index increased to 132.5 in June X3
- The raw material price variance for June was £8,700 adverse
- 1,250 litres of material Aly were purchased in June.

Complete the statements below. In order to calculate your answers, you should split the raw material price-variance into two components by calculating the part of the variance explained by the change in the price index and the part of the variance not explained by the changes in the price index.

The part of the variance explained by the increase in the price index is £_____.

The part of the variance not explained by the increase in the price index is £_____.

The percentage increase in the index is _____%

b. Hamma uses product Ber and has collected data from the last few months in order to forecast the cost per kilogram of Ber in the next period.

	April X3	May X3	June X3
Cost per kilogram of Ber (£)	1,457.92	1,593.66	1,729.40

Complete the table below to forecast the expected price of product Ber in September and December X3.

	September X3	December X3
Cost per kilogram of Ber (£)		

c. A colleague has calculated the least squares regression line (the line of best fit) as $y=29.83+4.65x$ where y is the cost per kilogram and x is the period. June X3 is period 38.

Complete the statement below.

The forecast cost per kilogram, using the regression line, for November X3 is £_____.

6. You have been provided with the following information for the month just ended for an organisation, which manufactures a single product:

	Budget		Actual	
Production (units)		25,000		28,400
Direct Materials	80,000 kg	£960,000	99,400 kg	£1,143,100

The finance director has asked you to write a note to help in the training of a junior accounting technician. The notes are to explain the calculation of the total direct material variance and how this variance can be split into a price variance and a usage variance. Calculations should be used to illustrate the explanation.

7. You have been provided with the following information for two scenarios involving a company which operates an absorption costing system.

	Scenario 1	Scenario 2
Sales volume (units)	80,000	115,000
	£	£
Revenue	950,000	1,000,500
Gross profit	390,000	431,250
Profit from operations	101,000	99,300
Net assets	1,500,000	1,980,000
Inventory	132,000	150,000

Calculate the following performance indicators for scenario 1 and 2.
Give your answers to three decimal places.

	Scenario 1	Scenario 2
Return on net assets		
Inventory holding period in days		
Sales price per unit		
Full production cost per unit		

Complete the table below for scenario 3.

	Scenario 3
Net assets (£)	150,000
Return on net assets (%)	12
Profit margin (%)	9
Gearing (%)	20.25
Profit (to the nearest £)	
Sales revenue(to the nearest £)	

Show the formula for calculating gearing. If there is more than one correct answer then either answer will achieve full marks.

8. Jack makes two products, A and B. The following information is available for the next month:

	Product A	Product B
	£ per unit	£ per unit
Selling price	1,800	2,480
Variable costs:		
Material costs (£240 per kilogram)	600	840
Labour cost	350	420
Total variable cost	950	1,260
Fixed costs:		
Production cost	300	450
Administration cost	180	300
Total fixed costs	480	750
Profit per unit	370	600
Monthly demand	450 units	360 units

The materials are in short supply in the coming month and only 2,000 kilograms of material will be available from the existing supplier.

Complete the table below.

	Product A	Product B
The contribution per unit		
The contribution per kilogram of material		
Ranking of products A and B		
Production in units		
Total contribution		

Jack has been approached by another materials supplier who can supply up to 500 kilograms of material at a cost per kilogram of £350. **Complete the table below.**

Should Jack purchase the additional material?	Give a reason
_____ Yes/No	

9. Jaffa Limited is considering designing a new product and will use target costing to arrive at the target cost of the product. You have been given the following information:
 The price at which the product will be sold has not yet been decided.
 It has been estimated that if the price is set at £50 the demand will be 30,000 units and if the price is set at £70 the demand will be 22,000 units
 The cost of production includes fixed production costs of £550,000 which will give a production capacity of 30,000 units
 In order to produce above this level the fixed costs will step up by £160,000
 The required profit margin is 25%
 The variable cost per unit is £20 for the production volume of 30,000 units
 For production volume of 22,000 the variable cost will be £21 per unit

Complete the table for both levels of demand.

	Sales price £50	Sales price £70
The target total production cost per unit		
The target fixed production cost per unit		
The target fixed production cost		

Complete the following sentence.

Jaffa Limited should set the price at £_____ in order to achieve the target profit margin.

10. You have been provided with the information for Alpha Limited:

Current position-

The selling price is currently £22 per unit. At this price demand is 150,000 units each year. The advertising costs are £500,000 per year. The current factory can produce a maximum of 400,000 units per annum. The labour and material costs are the only variable costs.

Proposed position-

The selling price will reduce to £18 per unit. Advertising costs will increase to £750,000 per year and it is expected this will increase demand to 300,000 units per year. The factory will still be limited to a production capacity of 400,000 units per year. The labour and material costs are the only variable costs.

The forecast information for each scenario is shown below.

Income statement	Current Position (Actual)	Proposed position (Forecast)
Sales price per unit	£22	£18
Sales volume	150,000	300,000
	£	£
Revenue	3,300,000	5,400,000
Direct materials	750,000	1,200,000
Direct labour	900,000	1,800,000
Fixed production costs	600,000	600,000
Total cost of sales	2,250,000	3,600,000
Gross profit	1,050,000	1,800,000
Fixed advertising costs	500,000	750,000
Administration costs	300,000	400,000
Profit	250,000	650,000
Material cost per unit	£5.00	£4.00
Labour cost per unit	£6.00	£6.00
Fixed production cost per unit	£4.00	£2.00
Fixed advertising cost per unit	£3.33	£2.50
Gross profit margin	31.82%	33.33%
Profit margin	7.58%	12.04%
Inventory of finished goods	£350,000	
Trade receivables	£500,000	

Draft a report for the finance director covering the following:

An explanation of why the gross profit margin for the proposed position is higher than the current position, referring to the following:

- Sales volume
- Materials cost
- Labour cost
- Fixed production costs

b. An explanation of what is likely to happen to the current asset position of the business by considering the following:

- Inventory levels (include a prediction of inventory level based upon the current inventory holding period)
- Trade receivable levels (include a prediction of the level based upon current trade receivables collection period).