

THE TRAINING PLACE OF EXCELLENCE

Budgeting

Practice Assessment: Answers

1. Match the data in the first column with the appropriate source in the second column.

Inflation rates	The Bank of England bulletins
Marketing campaigns being carried out by competitors	Market research consultant
Effect of climate change in different areas	National statistics
Business and economic trends	The Times

2. Who would you contact in each of the following situations?

You need information on the current sales demand levels	Sales department
You want to explain a labour rate variance	Human Resources dept.
You want to explain a materials rate variance	Purchasing department
You are investigating the variable overheads variance	Production manager

3. Select an appropriate accounting treatment for each of the following costs.

Cost	Accounting treatment
Raw material usage	Direct cost
Raw material wastage	Direct cost
Purchase of production machines	Capitalise and depreciate over useful life
Hire of production machines	Charge to production in a machine hour overhead rate
Research on customers needs and demands	Allocate to marketing overheads
Production staff wages	Charge to production in a labour hour overhead rate

4. Complete the following production forecast for product TAM.

Production budget in units	Week 1	Week 2	Week 3	Week 4	Week 5
Opening inventory	1,830	3,852	3504	3,648	
Closing inventory	3,852	3504	3,648	3,720	
Sales	12,000	16,050	14,600	15,200	15,500
Saleable production	14,022	15,702	14,744	15,272	
Rejected production	434	486	456	472	
Total manufactured units	14,456	16,188	15,200	15,744	

5. Purchase quantity = $(3,000\text{units} \times \{3.8\text{kg} / 0.95\}) + 980\text{kg} - 1,450\text{kg} = 11,530\text{kg}$

Overtime hours needed = $(3,000\text{units} \times 25\text{mins} / 60\text{mins}) - (5\text{staff} \times 200\text{hrs}) = 250\text{hrs}$

6. Set up the operating budget for Paddy Limited.

Materials	Kg	£
Used in production	13,500	14,975
Closing inventory	1,750	1,925

Labour	Hours	£
Basic time @ £3.60 per hour	3,600	12,960
Overtime	150	810
Total	3,750	13,770

Overhead	Hours	£
Variable @ £3.20 per hour	3,750	12,000
Fixed		3,355
Total		15,355

*Closing inventory of finished goods should be valued at the budgeted cost of production per unit.

Operating budget	Units	£ per unit	£
Sales revenue	10,500	8.62	90,150
Cost of goods sold:			£
Opening inventory of finished goods			9,200
Cost of production:		£	
Materials		14,975	
Labour		13,770	
Overheads		15,355	44,100
*Closing inventory of finished goods (£44100/9000X500)			(2,450)
Cost of goods sold			50,850
Gross profit/(loss)			39,660
Overheads:		£	
Marketing		11,450	
Administration		6,580	(18,030)
Operating profit/(loss)			21,630

7. To: Budget committee
From: Budget accountant

Date: xx/xx/xxxx
Subject: Draft sales budget

Budget submission

I attach the draft sales budget for your consideration and approval.

It is based on the sales manager's sales forecast and pricing proposal. This year's results are shown for comparison.

Product Bee is steadily growing in popularity and is well into its growth stage in the product's lifecycle.

The following assumptions have been made in setting the budget:

- The selling price can be increased by £0.75 (5.2%) from £14.50 to £15.25
- The sales volume will increase by 29,000units (14.1%) from 205,000units to 234,000units.
- A marketing campaign is needed to achieve the budgeted sales volume with the implementation of a price increase
- The marketing campaign will be well organised and executed to ensure it is effective in helping to meet the set targets
- The quality of the product and customers' acceptance of the product will continue to exist and increase
- There will continue to be a growth in sales into the future

The sales revenue forecast is £3,568,500 which is 20% increase for next year.

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Risk analysis

The sales manager's strategy is to increase the selling price of the product and carry out effective marketing campaigns through the year with an aim of achieving higher sales volume and higher sales revenue.

Where selling price is increased, there is the risk of deterring some customers from continuing to buy the product and this may cause a drop in the sales volume achievable.

There is a risk of the marketing campaign not being as effective as expected.

There is also the risk of the marketing campaign not being cost effective. As there is a price increase, there is a lot of reliance on the effectiveness of the marketing campaign to meet budgeted demand levels. This may cause the marketing manager to concentrate a lot of resources into the campaign.

The price increase could have an effect on the length of time the product may remain in its growth stage in the products lifecycle and the overall products lifecycle.

There is the risk of not meeting the required sales volume and this may affect the profits of the organisation if the fixed costs are maintained at the same level.

We also need to bear in mind the fact that the extra anticipated sales are intended to cover the special marketing campaign.

Performance indicators

We need to monitor the product's sales volume, price, market share and profitability. I recommend the following indicators are used:

- Weekly sales volume as a percentage increase or decrease on last year
- Average unit selling price versus budget
- Sales revenue as a percentage increase or decrease on last year
- Percentage of market share
- Contribution per unit (variable costs to include promotion)
- Revenue and cost variances
- Customers complaints levels
- Customers satisfaction levels
- Customers demand levels

8. Calculate the sales budget and the cost budgets for July.

	Budgets for the year	Budgets for July
Units sold	78,000	7,000
Units produced	80,400	6,700
	£	£
Sales	1,638,000	147,000
Costs:		
Materials used	663,300	55,275.00
Labour	185,850	15,487.50
Variable production overhead	118,188	9,849.00
Fixed overhead	48,600	4,050.00

9. Prepare the cash flow forecast

Cash flow forecast		£
Sales receipts		479,100
Payments:		£
Materials	185,550	
Labour	143,100	
Other costs	72,080	400,730
Cash flow		78,370

10. James Limited's alternative scenario:

Operating budget	First draft	Alternative scenario
Sales price per unit	£38.00	38.95
Sales volume	44,000	41,800
	£	£
Sales revenue	1,672,000	1,628,110
Costs:		
Materials	495,000	470,250
Labour	422,400	401,280
Energy	156,800	165,120
Depreciation	112,000	112,000
Total	1,186,200	1,148,650
Gross profit	485,800	479,460
Increase/ (decrease) in gross profit		(6,340)

11. Prepare the raw material cost statement from the activity data provided.

Raw material cost statement		£
Standard raw material cost of production	15,100x3.6kgx£6.8	369,648
Variances:		£ Fav/(Adv)
Material price (£6.80-£6.50)x55,870kg	(55870kgx£6.8)-£363,155	£16,761 F
Material usage {(15,100x3.60kg)-55,870}x£6.80	£369,648-(55870kgx£6.8)	£10,268 A
Material cost (£369,648 - £363,155)	£16,761F - £10,268A	£6,493 F

12. Flex the budget and variances

Original Budget		Flexed Budget	Actual	Variance Fav/(Adv)
31,500	Sales volume		34,000	
£		£	£	£
2,520,000	Turnover	2,720,000	2,856,000	136,000
	Costs			
441,000	Material	476,000	510,000	(34,000)
567,000	Labour	612,000	616,250	(4,250)
6,300	Distribution	6,800	7,000	(200)
151,000	Energy	161,000	164,000	(3,000)
32,000	Equipment Hire	36,000	35,000	1,000
182,000	Depreciation	182,000	180,000	2,000
231,000	Marketing	231,000	235,000	(4,000)
186,000	Administration	186,000	189,000	(3,000)
1,796,300	Total	1,890,800	1,936,250	(45,450)
723,700	Operating Profit	829,200	919,750	90,550

13. To: Chief Executive Date: xx/xx/xxxx
From: Budget accountant Subject: Review of operating statement

i. Reasons for variances

I have reviewed the results for the period. There was an operating profit of £245,620 compared with the flexed budgeted profit of £232,500. The original budget anticipated a profit of £292,100 based on sales of 49,000 units, which would have generated a higher contribution level.

The favourable sales revenue variance over the flexed budget of £41,000 (4.5%) was due to an unbudgeted price increase. This could have contributed to the reduction in the sales volume which would have also contributed to the sales revenue variance.

It is worth noting that if the actual costs had been kept to the budgeted levels at the actual volume of sales attained, the total costs should have been £669,500 (£596,500 + £72,950) and this would have led to a higher profit of £273,500, which would have been better than the actual profit of £245,620.

The total expenditure exceeded the flexed budget. The plant engineer decided to hire equipment rather than purchasing such equipment which is what was budgeted and planned.

This has contributed to a favourable variance of £3,740 (41.6%) in the depreciation cost and an unfavourable variance of £22,300 (71.6%) in equipment hire. The equipment hire cost is significantly higher than the original budget.

There is a total increase in actual costs of £27,880 (£27,220 + £660) when compared with the flexed budget and this has been mainly due to a combination of variances in equipment hire, materials, marketing costs, and distribution, amongst others.

If the original budgeted sales volume of 49,000 units was attained the net variance would have been reduced and the actual profit levels would have been higher.

ii. Avoiding the equipment hire and depreciation variances

The variances on equipment hire and depreciation could have been avoided if the plant engineer had been aware of the expected volume reduction.

Possibly he would have hired less equipment and may have possibly not needed to purchase any additional equipment either.

iii. Effect on the original standard cost

Original standard cost = $\{(\pounds596,500/41,000) \times 49,000\} + \pounds72,950 = \pounds785,900$

Revised standard cost = $\pounds596,500 + \pounds72,950 = \pounds669,500$

The original standard cost at 49,000 units of production would have been £785,900 and this will lead to a unit standard cost of £16.04 per unit and at the production level of 41,000 units, the standard cost is £669,500, which will be £16.33 per unit.

Standard costing is an excellent system for controlling variable costs but not so useful for fixed overheads. The unit standard cost is reducing as the volume increases and this is because of the fixed cost element.