1 Preparing budgets

1.1 Complete the following table by using ticks to show into which budget each item of cost would occur.

	Cost of production	Maintenance	Capital expenditure	Marketing	Finance
Direct labour wages					
Interest charges					
New computer system					
Entertaining customers					
Hire of machinery testing equipment					
Raw materials usage					

1.2 Complete the following table to show the forecast inventories and production units for a particular product.

Closing inventory should be 40% of the following week's forecast sales.

Number of Units	Week 1	Week 2	Week 3	Week 4	Week 5
Opening inventory	4,000				
Production					
Sub-total					
Forecast sales	10,000	12,500	11,000	10,500	12,000
Closing inventory					

Forecast sales in week 6 are 10,000 units.

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Closing inventory					

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1.3 24,000 units of finished product are to be manufactured during October. Each unit takes four minutes to produce. Nine staff each work 160 basic hours in October.

The number of overtime hours required to be worked in October is [ ]

1.4 Department K manufactures three products, Alpha, Beta and Gamma.

Calculate the machine hours required to manufacture these in November, using the following table.

Product	Units	Hours per unit	Hours required
Alpha	190	1.0	
Beta	200	2.5	
Gamma	270	3.2	
Total machine hours for department K			

There are three machines in the department.

Each machine can be used for 350 hours in November. Additional machines can be hired if required.

How many additional machines should be hired? [ ]

1.5 The following production budget for a month has been prepared.

Production budget	Units
Opening inventory of finished goods	5,000
Production	40,000
Sub-total	45,000
Sales	38,000
Closing inventory of finished goods	7,000

(a) Complete the following working schedule for raw materials. Each unit produced requires 0.75 kg of material. Closing inventory is valued at budgeted purchase price.

Raw materials	kg	£
Opening inventory of raw materials	3,500	7,000
Purchases of raw materials	32,000	64,000
Sub-total	35,500	71,000
Used in production		
Closing inventory of raw materials		

(b) Complete the following working schedule for direct labour. Each unit takes six minutes to make. There are 22 direct labour employees, each working 160 basic hours in the month. Additional hours are paid at an overtime rate of time and a half. The overtime premium is included in the direct labour cost.

Direct labour	Hours	Cost £
Basic time at £20 per hour		
Overtime		
Total		

(c) Complete the following working schedule for overheads. Variable overheads are recovered based on total labour hours worked.

Overheads	Hours	Cost £
Variable overheads at £2.00 per hour		
Fixed overheads		12,000
Total overheads		

(d) Complete the following operating budget, using information from the earlier tasks. Closing inventory of finished goods is to be valued at budgeted production cost per unit.

Operating budget	**Units**	**per unit £**	**£**
Sales		5.50	
Cost of goods sold:			
Opening inventory of finished goods			15,300
Cost of production:		£	
Raw materials			
Direct labour			
Production overheads			
Total cost of production			
Closing inventory of finished goods			
Cost of goods sold			
Gross profit			
Non-production overheads		£	
Administration		15,000	
Marketing		12,500	
Total non-production overheads			
Net profit			

1.6 The following budget data has been prepared.

Budget data	**June** £	**July** £	**August** £	**Sept** £
Credit sales	8,900	8,300	8,800	9,500
Purchases	4,200	5,100	4,800	4,900
Wages	2,300	2,350	2,300	2,400
Expenses	1,050	1,080	1,070	1,090
Capital expenditure	2,000		4,500	

Timings:

60% of credit sales are received in the month after sale, the remainder one month later. Purchases are paid in the month after purchase.

Wages are paid in the month incurred.

Expenses are paid in the month after they are incurred. Expenses include £200 per month depreciation.

Capital expenditure is paid immediately as it is incurred.

Complete a cash forecast for August, using the following table.

Cash forecast – August	£
Opening cash balance	16,400
Receipts from sales	
Payments for:	
Purchases	
Wages	
Expenses	
Capital expenditure	
Total payments	
Closing cash balance	

1.7 The cash budget for Haven Industries for the three months ended June has been partially completed. The following information is to be incorporated and the cash budget completed.

- A bank loan of £52,800 has been negotiated and this will be paid into the business bank account in April.
- The principal (capital) element of the bank loan (£52,800) is to be repaid in 48 equal monthly instalments beginning in May.
- The loan attracts 12% interest per annum calculated on the amount of the loan principal advanced in April. The annual interest charge is to be paid in equal monthly instalments beginning in May.
- When Haven Industries uses its bank overdraft facility, interest is payable monthly and is estimated at 2% of the previous month's overdraft balance. The interest is to be rounded to the nearest £.
- At 1 April the balance of the bank account was £1,750.

Using the additional information above, complete the cash budget for Haven Industries for the three months ending June. Cash inflows should be entered as positive figures and cash outflows as negative figures. Zeros must be entered where appropriate to achieve full marks.

	April £	**May** £	**June** £
RECEIPTS			
Cash sales	8,800	9,180	10,480
Credit sales	53,085	53,520	64,852
Bank loan		0	0
Total receipts			
PAYMENTS			
Purchases	–36,650	–37,005	–42,075
Wages	–18,800	–18,950	–18,450
Expenses	–10,350	–11,260	–13,260
Capital expenditure	0	–59,500	0
Bank loan capital repayment	0		
Bank loan interest	0		
Overdraft interest	0		
Total payments			
Net cash flow			
Opening bank balance			
Closing bank balance			

1.8 Minor Enterprises Limited has been trading for a number of years. The business has requested assistance with calculating sales receipts for entry into a cash budget.

Actual sales values achieved are available for January and February, and forecast sales values have been produced for March to June.

Minor Enterprises Limited estimates that cash sales account for 30% of the total sales. The remaining 70% of sales are made on a credit basis.

(a) Complete the table below to show the split of total sales between cash sales and credit sales.

	Actual sales £		Forecast sales £			
	January	February	March	April	May	June
Total sales	18,500	19,600	19,100	22,000	21,600	23,400
Cash sales						
Credit sales						

(b) Minor Enterprises estimates that 60% of credit sales are received in the month after sale with the balance being received two months after sale. For example, 60% of January's credit sales are received in February with the balance being received in March.

Using the table below and your figures from part (a), calculate the timing of sales receipts from credit sales that would be included in a cash budget for Minor Enterprises Limited for the period March to June.

			Cash received				
	Credit sales £		February £	March £	April £	May £	June £
January							
February							
March							
April							
May							
Monthly credit sales receipts							

1.9 Bishopswood Ltd is preparing cash payment figures ready for inclusion in a cash budget. The following information is relevant to the payment patterns for purchases, wages and expenses.

- Purchases are calculated as 65% of the next month's forecast sales and are paid two months after the date of purchase. For example, purchases in July are based on the estimated sales for August and paid for in September.

	Actual			**Forecast**		
	July £	**August** £	**September** £	**October** £	**November** £	**December** £
Total sales	71,000	77,800	76,200	80,000	85,000	87,000

- Wages are paid in the month that they are incurred and expenses are paid in the month after they are incurred. The actual and forecast figures for wages and expenses are:

	Actual			**Forecast**		
	July £	**August** £	**September** £	**October** £	**November** £	**December** £
Wages	8,500	8,750	9,000	8,800	8,700	8,950
Expenses (excluding depreciation)	7,450	9,010	6,450	7,100	8,050	7,300

- A new machine is to be purchased in October at a total cost of £40,500. Payment for the machine is to be made in three equal monthly instalments, beginning in October.
- The machine is to be depreciated monthly on a straight-line basis at 20% per annum.

Prepare an extract of the payments section of the cash budget for Bishopswood Ltd for the three months ended December.

	October £	**November** £	**December** £
PAYMENTS			
Purchases			
Wages			
Expenses			
New machine			
Total payments			

1.10 Capital Limited has budgeted for the following levels of raw material inventory (in units) over the next few periods:

Inventory (in units) at start of following periods:

Period 1	Period 2	Period 3	Period 4	Period 5
1,070	1,200	1,375	1,080	1,500

The raw materials usage budget shows the following figures (in units) for the same periods:

Period 1	Period 2	Period 3	Period 4	Period 5
5,650	7,480	4,890	4,850	6,990

Each unit of raw material costs £40 to purchase.

Payments for purchases are made as follows from Period 1 onwards:

60% of raw material purchases are paid in the period after delivery

30% of raw material purchases are paid two periods after delivery

10% of raw material purchases are paid three periods after delivery

Required:

Calculate the amounts to be paid for raw materials in each of periods 3 and 4. You may use the following tables if you wish.

	Period 1 units	Period 2 units	Period 3 units	Period 4 units	Period 5 units
Raw materials usage					
– opening inventory					
+ closing inventory					
= raw materials purchases					

	Payments in Periods:				
	Total £	Period 2 £	Period 3 £	Period 4 £	Period 5 £
Period 1 purchases					
Period 2 purchases					
Period 3 purchases					
Total purchase payments					