
Cash Budgets

Irwin LTD

2016

Step By Step Approach

PART A

Part A is asking you to calculate a production budget for four months. This is how many units need to be made each month. The layout will be the following

A. Sales in units	These figures are usually taken from the question
B. Add Closing stock	<ol style="list-style-type: none"> 1. There will be a certain percentage of stock to be produced for the next month 2. It will be calculated by using the sales units sold for the next month by the percentage given in the question 3. It is added back on because it is the company's policy to product some units for the next period (Month)
C.	Add the figure for A and B together
D. Less Opening Stock	<ol style="list-style-type: none"> 1. Remember the closing figure for one month is the opening figure for the next month 2. We take this figure away because the units have been produced in the previous month as per the question
E. Required for Production	<ol style="list-style-type: none"> 1. Take the figure for D away from the figure calculate for C 2. This figure will be used later on in part B

Sales

Take these figures from the question

1. These figures are taken straight from the question

	July	August	September	October	November
Sales	9,000	9,750	11,000	12,000	12,500

Closing Stock

An adjustment is needed here

1. See part (ii) from the question - it says

'Stock of finished goods are maintained at 60% of the following month's sales requirement.'

2. This means that at the end of July we should have 60% of August sales in closing Stock.
3. The following workings show you how to calculate the closing stock figure for each month

Workings**July**

9,750 (August Sales) * 60%
= €5,850

August

11,000 (September Sales) * 60%
= €6,600

September

12,000 (October Sales) * 60%
= €7,200

October

12,500 (November Sales) * 60%
= €7,500

Even though it says for 4 months in the question, we need to calculate the closing stock for November as well. This will be needed for part B

November

12,800 (December Sales) * 60%
= €7,680

Tip - each of the unit's figure for the month is taken from the question

	July	August	September	October	November
Sales	9,000	9,750	11,000	12,000	12,500
+ Closing stock	(+) 5,850	(+) 6,600	(+) 7,200	(+) 7,500	(+) 7,680
	14,850	16,350	18,200	19,500	20,180

NOTE - Remember to add the sales figure and closing stock figure together to see what the total units that will be produced each month.

The next step will take the opening stock away for each month

Opening Stock

Take these figures from closing stock

- Remember the closing stock figure for one month is the opening stock figure for the next month.
- We take away the opening stock figure because it is already included in the previous months figure. In this question we don't know the closing stock figure for June so we will put it as 0 (Zero) for the opening figure for July.

3. The Opening stock figure for August will be the closing stock figure for July and this will continue for the other months

	July	August	September	October	November
Sales	9,000	9,750	11,000	12,000	12,500
+ Closing stock	(+) 5,850	(+) 6,600	(+) 7,200	(+) 7,500	(+) 7,680
	14,850	16,350	18,200	19,500	20,180
- Opening Stock	0	(-) 5,850	(-) 6,600	(-) 7,200	(-) 7,500

Required for Production

Take these figures from previous figures (workings)

1. The formula to calculate the units needed for production is

$$\text{Sales} + \text{Closing stock} - \text{Opening Stock} = \text{Required for production}$$

2. These figures will be used for Part B to help calculate the raw materials purchases budget

Production budget for Irwin Ltd for the four months					
	July	August	September	October	November
Sales	9,000	9,750	11,000	12,000	12,500
+ Closing stock	(+) 5,850	(+) 6,600	(+) 7,200	(+) 7,500	(+) 7,680
	14,850	16,350	18,200	19,500	20,180
- Opening Stock	0	(-) 5,850	(-) 6,600	(-) 7,200	(-) 7,500
Required for Production	14,850	10,500	11,600	12,300	12,680

PART B

Part B is asking you to calculate the raw materials purchases budget for four months. This is how much of a certain material is needed each month to produce the units that have to be made each month (calculated in part A). The layout is similar to Part A and look like this

A. Units of Production	Calculated in Part A - Required for Production
B. Materials Per Unit	<ol style="list-style-type: none"> 1. This figure is usually given in the question (see part (ii)) 2. Multiply this figure by the Units of production figure (A)
C. Required for production	Add the figure for A and B together
D. Add Closing stock	<ol style="list-style-type: none"> 1. There will be a certain percentage of stock of raw material to be held at the end of each month (see part (iii)) 2. It will be calculated by using the required for production for the next month and multiply it by the percentage given in the question 3. It is added back on because it is the company's policy to keep some raw materials from next month as part of this months (as per the question)
E. Less Opening Stock	<ol style="list-style-type: none"> 1. Remember the closing figure for one moth is the opening figure for the next month 2. We take this figure away because the units have been produced in the previous month as per the question
F. Required for Production	<ol style="list-style-type: none"> 1. Take the figure for D away from the figure calculate for C 2. This figure will be used late on in Part

Units of Production

Take these from Part A

1. Take these figures from part A
2. The unit for production figures are the figures that were calculate at the end of Part A
- Required for Production

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680

Materials Per Unit

Use the figure that is given in the question

1. See part (ii) from the question - it says

'Each product unit requires 3 kgs of material X which costs €4 per Kg'

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3

Required for Production

An adjustment is needed here

1. This is where we multiply the figure in A (Units of Production) by B (Materials per Unit)

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040

Closing Stock

An adjustment is needed here

1. See part (iii) from the question - it says

'Stocks of raw materials sufficient for 20% of the following month's requirement in kgs are held at the end of each month'

2. This means that at the end of July we should have 20% of August kgs in closing Stock

Workings**July**

31,500 (August Requirements) * 20%
= €6,300

August

34,800 (September Requirements) * 20%
= €6,960

September

36,900 (October Requirements) * 20%
= €7,380

October

38,040 (November Requirements) * 20%
= €7,608

Note - This is the reason we have a column for November to help calculate the closing stock for October

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040
D. + Closing Stock	(+) 6,300	(+) 6,960	(+) 7,380	(+) 7,608	
	50,850	38,460	42,180	44,508	

NOTE - Remember to add the figures for required for production and closing stock together
The next step will take the opening stock away for each month

Opening Stock

Take these figures from closing stock

1. Remember the closing stock figure for one month is the opening stock figure for the next month.
2. We take away the opening stock figure because it is already included in the previous months figure.

In this question we don't know the closing stock figure for June so we will put is 0 (Zero) for the opening figure for July. The Opening stock figure for August will be the closing stock figure for July and this will continue for the other months

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040
D. + Closing Stock	(+) 6,300	(+) 6,960	(+) 7,380	(+) 7,608	
	50,850	38,460	42,180	44,508	
E. - Opening Stock	0	(-) 6,300	(-) 6,960	(-) 7,380	

Required for Purchases

Take these figures from previous figures (workings)

- This is when you take away opening stock away from the figure above it.

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040
D. + Closing Stock	(+) 6,300	(+) 6,960	(+) 7,380	(+) 7,608	
	50,850	38,460	42,180	44,508	
E. - Opening Stock	0	(-) 6,300	(-) 6,960	(-) 7,380	
A. Required For Purchase	50,850	32,160	35,220	37,128	

Price Per KG

Use the figure that is given in the question

- See part (ii) from the question - it says

'Each product unit requires 3 kgs of material X which costs €4 per Kg'

	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040
D. + Closing Stock	(+) 6,300	(+) 6,960	(+) 7,380	(+) 7,608	
	50,850	38,460	42,180	44,508	
E. - Opening Stock	0	(-) 6,300	(-) 6,960	(-) 7,380	

B. Required For Purchase	50,850	32,160	35,220	37,128	
C. Price Per KG	€4	€4	€4	€4	

Cost of Raw Material

An adjustment is needed here

1. This is where we multiply the figure in I (Required for Purchase) by J (Price per KG)

4 months raw materials purchases budget (in units and €) for Irwin Ltd					
	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040
D. + Closing Stock	(+) 6,300	(+) 6,960	(+) 7,380	(+) 7,608	
	50,850	38,460	42,180	44,508	
E. - Opening Stock	0	(-) 6,300	(-) 6,960	(-) 7,380	
D. Required For Purchase	50,850	32,160	35,220	37,128	
E. Price Per KG	€4	€4	€4	€4	
F. Cost of Raw Material	203,400	128,640	140,880	148,512	

NOTE - Remember to include the heading - 4 months raw material purchases budget (in units and €) for Houghton Ltd

PART C

Part C is asking you to Prepare a cash budget for four months. The budget will look like the following

Cash budget for Houghton Ltd for the four months July to October 2020.					
Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200
2. Total Payments	169,900	298,425	299,940	246,480	944,745
Net Cash	(88,900)	(116,175)	65,935	79,395	(59,745)
Opening Cash		(+) (40,900)	(+) (157,075)	(91,140)	
Bank Loan	(+) 48,000				(+) 48,000
Closing Cash	(40,900)	(157,075)	(91,140)	(11,745)	(11,745)

NOTE - You don't have to complete the total column but the closing cash for October and the closing cash for the Total Column must be the same - this can be a way to check if the question has been completed correctly - TIMING MAY BE AN ISSUE HERE

Important totals are as follows. These will be needed for part D when you will have to prepare a budgeted profit and loss account.

Wages	Variable Overheads
Fixed Costs	Loan Interest

Remember to include - Discount, interest and depreciation as well for part D

RECEIPTS

An adjustment is needed here

This is the income for the business over a four-month period. In the question under part (iv) It gives you cash customer and credit customers

Cash and Credit Receipts

1. Cash customer says that 30% of sales revenue will be for immediate cash.
 - a. Calculate the revenue for each month (Sales x by selling price)
 - b. Calculate the 30% of Revenue (what you calculated in part a) (70% will be collected in the next month and the next month after that - 50% each month)
2. Credit customer says 70% of sales revenue will be from credit customers. These debtors will pay their bills 50% in the month after sale and the remainder in the second month after sale.

Workings**July**Cash Sales

€270,000 * 30% Taken from the question
 (-) €81,000 Cash sales July
 €189,000

Credit Sales

€189,000 * 50%
 (-) €94,500 Month 1 Credit sales Aug
 €94,500 Month 2 Credit sales Sept

AugustCash Sales

€292,500 * 30% Taken from the question
 (-) €87,750 Cash sales August
 €204,750

Credit Sales

€204.750 * 50%
 (-) €102,375 Month 1 Credit sales Sept
 €102,375 Month 2 Credit sales Oct

SeptemberCash Sales

€330,000 * 30% Taken from the question
 (-) €99,000 Cash sales Sept
 €231,000

Credit Sales

€231,000 * 50%
 (-) €115,000 Month 1 Credit sales Oct
 €115,500 Not needed (4 months)

October**Cash Sales**

€360,000 * 30% Taken from the question

(-) €108,000 Cash sales Oct

€252,000

Don't need the 70% as we are not required to have them for this question as we are only doing the cash budget for 4 months

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875

Debtors Figure

NOTE - The September figure for credit sale (2 months) of €115,500 the October figure of €252,000 and the November figure would be the debtor's figure if you were asked to complete a balance sheet

Total Receipts

An adjustment is needed here

- To calculate the Total Receipts, we add up the figures cash sale and credit sales for each month

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000

<u>PAYMENTS</u>

We keep working down through the question. The next Adjustment (v), relates to purchases

'One month's credit is received from suppliers.'

Purchases

An adjustment is needed here

- The purchases figures have already been calculated as part of Part B.

	July	August	September	October	November
F. Cost of Raw Material	203,400	128,640	140,880	148,512	

- See part (v) from the question - it says

'one month's credit is receive from suppliers'

- This means that July is not due until August, August is not due until Sept and so forth.

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
3. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920

Creditors Figure

NOTE - The October figure of €148,512 is not included in the cash budget as the budget is only for 4 months. But this €148,512 would be the creditors figure if you were asked to complete a balance sheet

EXPENSES

NOTE -

- Adjustment (vi) will give you the list of the rest of the expenses that will go in the payments section of the cash budget. These include

(a) Wages	(b) Variable Overheads
(c) Fixed Overheads	(d) Equipment (Just the figure from the question)
(e) Loan Repayment	(f) Loan Interest
- Work down through these expenses, complete the working (if needed) and enter the figures into the Cash Budget

Remember not to include depreciation as this is not cash and only cash items are entered into the cash budget but the depreciation for will be included in part D - prepare a budgets trading and profit and loss account for Irwin Ltd

Wages

An adjustment is needed here

- It tells us under expected costs that
'wages are €10,000 plus 5% of sales revenue per month , payable as incurred'
- To complete this working, we need to take the sales revenue (as per the question) and find 5% of this and then add this figure to the wages figure of €10,000

Sales Revenue (as per the question)

	July	August	September	October	November
Sales Revenue	270,000	292,500	330,000	360,000	375,000

Taken form the question

Workings

July

Sales Revenue	€270,000	Taken from the question
€270,000 * 5%	= €13,500	
Wages	= <u>(+) €10,000</u>	Taken form the question - Expected Costs Wages
	= €23,500	

August

Sales Revenue	€292,500	Taken from the question
€292,500 * 5%	= €14,625	
Wages	= <u>(+) €10,000</u>	Taken form the question - Expected Costs Wages
	= €24,625	

September

Sales Revenue	€330,000	Taken from the question
€330,000 * 5%	= €16,500	
Wages	= <u>(+) €10,000</u>	Taken form the question - Expected Costs Wages
	= €26,500	

October

Sales Revenue	€360,000	Taken from the question
€360,000 * 5%	= €18,000	
Wages	= <u>(+) €10,000</u>	Taken from the question - Expected Costs Wages
	= €28,000	

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
4. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625

Variable Overheads**An adjustment is needed here**

- It tells us under expected costs that

Variable overheads €4 per unit, payable as incurred'
- Variable overhead are overheads that increase when more units are produced (For example Light and heat - the more you use the more you pay, raw materials the more you use the more you pay).
- To calculate the variable overheads for this question we take the units that need to be produced for that month (see Part A) and multiple it by the variable overhead per unit (from the question)

Units that need to be produced

	July	August	September	October	November
Required for Production	14,850	10,500	11,600	12,300	12,680

Taken from part A

Workings**July**

Units to be produced	14,850	Taken form Part A
Variable OH PU	<u>(x) €4</u>	Taken from the Question
	€59,400	

August

Units to be produced	10,500	Taken form Part A
Variable OH PU	<u>(x) €4</u>	Taken from the Question
	€42,000	

September

Units to be produced	11,600	Taken form Part A
Variable OH PU	<u>(x) €4</u>	Taken from the Question
	€46,400	

October

Units to be produced	12,300	Taken form Part A
Variable OH PU	<u>(x) €4</u>	Taken from the Question
	€49,200	

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Opening Cash		(+) (40,900)	(+) (157,075)	(91,140)	
Bank Loan	(+) 48,000				(+) 48,000
Closing Cash	(40,900)	(157,075)	(91,140)	(11,745)	(11,745)

Fixed Overheads

An adjustment is needed here

1. It tells us under expected costs that

'Fixed overheads (including depreciation) €28,000 per month, payable as incurred.'

2. The fixed cost in the question includes depreciation. As we are doing a cash budget, we only include cash items.
3. This means we need to calculate the depreciation on the equipment and take it out of the fixed costs figure.
4. This new figure for fixed costs will go in the cash budget and the depreciation figure will go in the Profit and Loss Account (Part D)
5. As part of Capital Cost is says

'equipment will be purchased on 1 July costing €60,000 which will have a useful life of 5 years'

To calculate the depreciation, we do the following

$$€60,000 / 5$$

$$€12,000 \quad \text{Depreciation per year}$$

We are doing the cash budget per month, so we need to find the monthly depreciation figure

$$€12,000 / 12$$

$$€1,000 \quad \text{Depreciation per year}$$

Fixed Costs	€28,000	Taken from the question
Depreciation	<u>€1,000</u>	See above working (Depreciation per month)
	€27,000	Fixed Cost Cash Budget

NOTE

As the €27,000 figure is the fixed cost figure it will be the same for each month in the cash budget

The depreciation for the budget trading and profit and loss account would be

$$€1,000 * 4 \text{ Months} = €4,000$$

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000

Equipment

Use the figure that is given in the question

- It tells us under capital costs that

'Equipment will be purchased on 1 July costing €60,000 which will have a useful life of 5 years.'

- This means that in July you put €60,000

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000

Loan Repayments

An adjustment is needed here

1. It tells us under capital costs that

'To finance this purchase, a loan of €48,000 will be secured at 10% per annum'

and

'The loan and interest will be repaid over 4 years'

2. To find out how much the instalments are we take the loan figure from the question and divide it by 48

$$€48,000 / 48 = €1,000 \text{ per month}$$

NOTE - As per the question the repayment on the loan and the interest doesn't start until August

'Monthly capital and interest payments will commence in August'

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000

Loan Interest

An adjustment is needed here

1. It tells us under capital costs that

'To finance this purchase, a loan of €48,000 will be secured at 10% per annum'

and

"this loan and interest will be repaid over 4 years"

NOTE -

'Monthly capital and interest will commence in August'

Because it doesn't say 'The interest for each month is to be paid on the last day of the month based on the amount of the loan outstanding at that date' we use the simple formula

Principal * rate * time

Workings

Principal * Rate

Remember the budget is per month, so

€48,000 * 10%

Taken from the question

€4,800 / 12

€4,800

Yearly amount

€480

Monthly amount

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200

Total Payments

An adjustment is needed here

- To calculate the Total Payment, we add up the figures in the payment section for each column for each month

2. This will include - purchases + wages + variable overheads + fixed costs + equipment + loan repayment + loan interest

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
5. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200
1. Total Payments	169,900	298,425	299,940	246,480	944,745

Net Cash

An adjustment is needed here

- To calculate the Net Cash, we take the Total Receipts (A) and take away the Total Payments (B)

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
1. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200
2. Total Payments	169,900	298,425	299,940	246,480	944,745
Net Cash	(88,900)	(116,175)	65,935	79,395	(59,745)

Opening Cash

An adjustment is needed here

1. Remember the closing cash for one month is the opening cash for the next month
For example July's Closing Cash will be August's Opening Cash, August Closing Cash will be September Opening Cash and so forth.

2. There may not be any opening cash for the first month, so we leave it blank or put in Zero (0). If there was any opening cash, it would tell you in the question

NOTE - This part of the question will have to be complete column by column (month by month), this is because you will have to calculate the closing cash for the month, so you have the opening cash for the next month

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
3. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200
4. Total Payments	169,900	298,425	299,940	246,480	944,745
Net Cash	(88,900)	(116,175)	65,935	79,395	(59,745)
Opening Cash		(+) (40,900)	(+) (157,075)	(91,140)	
Bank Loan	(+) 48,000				(+) 48,000
Closing Cash	(40,900)	(157,075)	(91,140)	(11,745)	(11,745)

Bank Loan

Use the figure that is given in the question

1. It tells us under capital costs that

'To finance this purchase, a loan of €48,000 will be secured at 10% per annum.'

2. The loan figure will be taken from the question and will be the loan figure that was used to purchase the equipment (€48,000)

Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
5. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200
6. Total Payments	169,900	298,425	299,940	246,480	944,745
Net Cash	(88,900)	(116,175)	65,935	79,395	(59,745)
Opening Cash		(+) (40,900)	(+) (157,075)	(91,140)	
Bank Loan	(+) 48,000				(+) 48,000
Closing Cash	(40,900)	(157,075)	(91,140)	(11,745)	(11,745)

Closing Cash

An adjustment is needed here

1. The closing cash is calculated by adding Net Cash, opening cash and bank loan (if any) together

NOTE - Remember the closing cash for one month is the opening cash for the next month

Cash budget for Irwin Ltd for the four months July to October 2020.					
Receipts	July	August	September	October	Total
Cash Sales	81,000	87,750	99,000	108,000	375,750
Credit Sale (1 month)		94,500	102,375	115,500	312,375
Credit Sale (2 month)			94,500	102,375	196,875
7. Total Receipts	81,000	182,250	295,875	325,875	885,000
Payments					
Purchases		203,400	128,640	140,880	472,920
Wages	23,500	24,625	26,500	28,000	102,625
Variable Overheads	59,400	42,000	46,400	49,200	197,000
Fixed Costs	27,000	27,000	27,000	27,000	108,000
Equipment	60,000				60,000
Loan Repayments		1,000	1,000	1,000	3,000
Loan interest		480	480	480	1200
8. Total Payments	169,900	298,425	299,940	246,480	944,745
Net Cash	(88,900)	(116,175)	65,935	79,395	(59,745)
Opening Cash		(+ (40,900)	(+ (157,075)	(91,140)	
Bank Loan	(+ 48,000				(+ 48,000
Closing Cash	(40,900)	(157,075)	(91,140)	(11,745)	(11,745)

NOTE - You don't have to complete the Total Colum but the closing cash for October and the closing cash for the Total Column must be the same - this can be a way to check if the question has been completed correctly - TIMING MAY BE AN ISSUE HERE

NOTE - Remember to include the heading - 4 months raw material purchases budget (in units and €) for Houghton Ltd

PART D

Part D is asking you to prepare a budget trading, profit and loss for four months. This will have the same layout as Question one. The budget will look like the following

Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020

Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020			
Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000
Gross Profit			811,500
<u>Less Expenses</u>			
Wages		102,625	
Variable Overheads		(+) 197,000	
Fixed Overheads		(+) 108,000	
Depreciation		(+) 4,000	(-) 411,625
Operating Profit			399,875
Less Interest			(-) 1,200
Net Profit			398,675

Sales

A calculation is needed here

- The figure for sales is calculate by taking the sales revenue for July, August, September and October and adding them together (See Working for Part C - Receipts - Cash and Credit Sales)

July	€270,000	(Part C - Receipts - Cash and Credit Sales working)
August	€292,500	(Part C - Receipts - Cash and Credit Sales working)
September	€330,000	(Part C - Receipts - Cash and Credit Sales working)
October	<u>€360,000</u>	(Part C - Receipts - Cash and Credit Sales working)
	€1,252,500	

Sales			1,252,500
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Opening Stock

There is no opening stock given to use in this question so we can leave it blank or put in zero (0)

Purchases

Use the figures from part B

- The Purchases figure is got by taking the total for cost of raw material for each month from part B and adding them together
- You can have a total when completing part B as well

	July	August	September	October	November
G. Cost of Raw Material	203,400	128,640	140,880	148,512	

Taken from part B

July	€203,400	(July Total from part B)
August	€128,640	(August Total from part B)
September	€140,880	(September Total from part B)
October	<u>€148,512</u>	(October Total from part B)
	€621,432	

Sales			1,252,500
Less Cost of Sales			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	

Closing Stock

An adjustment is needed here

NOTE - in the question it tells us that closing stock should be valued at

1. €20 for finished goods (as per part d of the question). The closing stock figure for finished goods will be taken from Part A (see table below)
2. €4 per kg for unfinished goods (as per part (ii)). The Closing stock for unfinished goods will be taken from Part B (see Table below)

Remember we are doing the Trading Profit and Loss account for 4 months so we will use the October column and not the November column

Production budget for Irwin Ltd for the four months					
	July	August	September	October	November
Sales	9,000	9,750	11,000	12,000	12,500
+ Closing stock	(+) 5,850	(+) 6,600	(+) 7,200	(+) 7,500	(+) 7,680
	14,850	16,350	18,200	19,500	20,180
- Opening Stock	0	(-) 5,850	(-) 6,600	(-) 7,200	(-) 7,500
Required for Production	14,850	10,500	11,600	12,300	12,680

Taken from Part A

4 months raw materials purchases budget (in units and €) for Irwin Ltd					
	July	August	September	October	November
A. Units of Production	14,850	10,500	11,600	12,300	12,680
B. Materials Per Unit	(x) 3	(x) 3	(x) 3	(x) 3	(x) 3
C. Required for Production	44,550	31,500	34,800	36,900	38,040
D. + Closing Stock	(+) 6,300	(+) 6,960	(+) 7,380	(+) 7,608	
	50,850	38,460	42,180	44,508	
E. - Opening Stock	0	(-) 6,300	(-) 6,960	(-) 7,380	
H. Required For Purchase	50,850	32,160	35,220	37,128	
I. Price Per KG	€4	€4	€4	€4	
J. Cost of Raw Material	203,400	128,640	140,880	148,512	

Taken form Part B

WorkingFinished Goods Closing stock $7,500 * €20 = 150,000$ Raw material Closing stock $7,608 * €4 = 30,432$

Sales			1,252,500
Less Cost of Sales			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	

Cost of Goods Sold

A calculation is needed here

- To calculate the cost of sales - take the closing stock figure away from the purchases figure (Opening stock + purchases)

Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000

Gross Profit

A calculation is needed here

- Gross profit is calculated by taking the figure of cost of sales away from the sales figure $€1,252,500 - €441,000 = €811,500$

Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000
Gross Profit			811,500

Expenses

A calculation is needed here

For the Expenses we work down through the payment's items from the cash budget

- Purchases This item will go in the trading section of the profit and loss account

2. Wages add up all the figures for each month to get the total figure.
(€23,500 + €24,625 + €26,500 + €28,000 = €102,625)
3. Variable Overheads add up all the figures for each month to get the total figure.
(€59,400 + €42,000 + €46,400 + €49,200 = €197,000)
4. Fixed Costs add up all the figures for each month to get the total figure.
(€27,000 + €27,000 + €27,000 + €27,000 = €108,000)
5. Depreciation Also include the depreciation for equipment
(€1,000 * 4 months = €4,000)

There is no discount in this question, so we leave it out

We add up all the expense figure to get a total

Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000
Gross Profit			811,500
<u>Less Expenses</u>			
Wages		102,625	
Variable Overheads		(+) 197,000	
Fixed Overheads		(+) 108,000	
Depreciation		(+) 4,000	(-) 411,625

Operating Profit

A calculation is needed here

- Using the Gross Profit figure, we take away the total expense figure away from it to get the operating profit figure - €811,500 - €411,625 = €€817,920

Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000
Gross Profit			811,500
<u>Less Expenses</u>			
Wages		102,625	
Variable Overheads		(+) 197,000	
Fixed Overheads		(+) 108,000	
Depreciation		(+) 4,000	(-) 411,625
Operating Profit			399,875

Less Interest

A calculation is needed here

- The interest figures are already calculated in Part C as part of the cash budget. Add up all the figures for each month to get the total.

Receipts	July	August	September	October	Total
Loan interest		480	480	480	1200

Taken from Part C working - Interest

Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+) 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000
Gross Profit			811,500
<u>Less Expenses</u>			
Wages		102,625	
Variable Overheads		(+) 197,000	
Fixed Overheads		(+) 108,000	
Depreciation		(+) 4,000	(-) 411,625
Operating Profit			399,875
Less Interest			(-) 1,200

Net Profit

The Net profit figure is calculated by using the Operating profit figure and taking away the interest paid

$$(\text{€}399,875 - \text{€}1,200 = \text{€}398,675)$$

Net Profit

A calculation is needed here

1. The Net profit figure is calculated by using the Operating profit figure and taking away the interest paid ($\text{€}399,875 - \text{€}1,200 = \text{€}398,675$)

NOTE - Remember to include the heading - Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020

Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020			
Sales			1,252,500
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+ 621,432	
		621,432	
Less Closing Stock			
Finished Goods	150,000		
Raw Material	(+ 30,432	(-) 180,432	
Cost of Goods Sold			(-) 441,000
Gross Profit			811,500
<u>Less Expenses</u>			
Wages		102,625	
Variable Overheads		(+ 197,000	
Fixed Overheads		(+ 108,000	
Depreciation		(+ 4,000	(-) 411,625
Operating Profit			399,875
Less Interest			(-) 1,200
Net Profit			398,675

PART E

This is the theory part of the question and includes the following

(i) What recommendations would you make to Irwin Ltd based on the budgets you have prepared?

1. Reduce requirement for closing stock of finished goods, particularly in earlier months to reduce the costs of production.
2. Negotiate a lower price than the €4 per kg, from suppliers when buying raw materials and this will reduce cash expenditure.
3. Encourage debtors to pay earlier by offering discounts for early payment/reduce the period of credit allowed from 2 months to one month, which will increase receipts.
4. Postpone the purchase of equipment in July and instead lease the equipment. This will reduce the deficit in July by €12,000 (€60,000 - €48,000) and by the interest and loan repayments €1,400 thereafter.

(ii) Outline the factors which Irwin Ltd should take into account when estimating future sales figures.

1. Market research and trends/opinion of sales representatives may be a reliable indicator of potential sales.
2. What is the price to be charged for the product or service?
3. Is the level of competition in the market place intense or not?
4. Is the economy expected to grow over the coming months?