# Production Budgets 

## Harrington LTD

## 2022

## Step By Step <br> Approach

## PART A

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

| A. Sales in units | These figures are usually taken from the question - sales are expected to be. |
| :---: | :---: |
| B. Add Closing stock | 1. There will be a certain percentage of stock to be increased/decreased. This will usually be given at the start of the question <br> 2. It will be calculated by using stock of finished goods on the 01.01 and increasing/reducing it by the percentage given at the start of the question |
| C. | Add the figure for $A$ and $B$ together |
| D. Less Opening Stock | 1. This figure will be given in the question <br> 2. It can be identified by the sentence - 'Stock of finished goods on the 01/01/ xx are expected to be |
| E. Required for Production | 1. Take the figure for $D$ away from the figure calculate for $C$ <br> 2. This figure will be used later on in the questions |

## Sales

Take these figures from the question

1. These figures are taken straight from the question

|  | Golden | Portland |
| :--- | :--- | :--- |
| Sales are expected to be | 15,200 | 8,400 |

Taken from the question

Tip - Make sure to use the finished goods figures

## Closing Stock

An adjustment is needed here

1. It the question is says the following about closing stock
'all stock are to be decreased by $10 \%$ from their opening levies by 31/12/2023 and are valued using FIFO method.'

And
Tip - Make sure to use the finished goods figures
'Stock of finished goods on 01/01/2023 are expected to be'

| Golden | 900 units @ $€ 210$ each |
| :--- | :--- |
| Portland | 750 units @ $€ 290$ each |

Taken form the question
2. This means that at the end of the year the opening stock figure for each product will have decreased by $10 \%$.
3. The following workings show you how to calculate the closing stock figure for each product

## Workings

Exam Tip - Exam Tip Make sure to look out for if the closing stock will increase or decrease

## Golden

| as per question | Opening Stock | 900 |
| :--- | :--- | :--- |
| as per question | Reduction | $\underline{90}$ |
|  | Cl. Stock | 810 |

## Portland

as per question
as per question

Opening Stock
750
Reduction 75
Cl. Stock

625

|  | Golden | Portland |
| :--- | :--- | :--- |
| Sales are expected to be | 15,200 | 8,400 |
| Add Closing Stock | 810 | 625 |
|  | 16,010 | 9,075 |

NOTE - Remember to add these two figures together to get the total $(15,200+810=16,010$ and $8,400+625=9,075)$

## Opening Stock

## Take these figures from the question

1. The question says the following about the opening stock figures for finished goods
'Stock of finished goods on 01/01/2023 are expected to be'

| Golden | 900 units @ $€ 210$ each |
| :--- | :--- |
| Portland | 750 units @ $€ 290$ each |

Taken from the question
2. This means that the opening stock figure for Golden is 900 units and for Portland it is 750

|  | Golden | Portland |
| :--- | :--- | :--- |
| Sales are expected to be | 15,200 | 8,400 |
| Add Closing Stock | 810 | 625 |
|  | 16,010 | 9,075 |
| Less Opening Stock | 900 | 750 |

## Budget production in units

Take these figures from previous figures (workings)

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

Sales + Closing stock - Opening Stock = Required for production
2. These figures will be used for Part B - Prepare a raw materials purchases budget (in units and $€$ )

| Production budget for Harrington Ltd in units |  |  |
| :--- | :--- | :--- |
|  | Golden | Portland |
| Sales are expected to be | 15,200 | 8,400 |
| Add Closing Stock | 810 | 625 |
|  | 16,010 | 9,075 |
| Less Opening Stock | $(900)$ | $(750)$ |
| Budget Production in Units | 15,110 | 8,325 |

NOTE - Remember to take these two figures away from each other to get the total (16,010$900=15,110$ and $9,075-750=8,325$ )

NOTE - Remember to include the heading - Production budget for Harrington Ltd

Exam Tip - You can do the workings on the statement or on a calculator - there is no need for the workings

Exam Tip - Make sure to use the figures for
finished goods and not raw materials

## Tutorial Video



## PART B

Part $B$ is asking you to calculate the raw materials purchases budget. This is how much of a certain material is needed each to produce the two products. The units from part $A$ will be used as part of working. The layout is similar to Part A and look like this

| A. Required for Production | 1. A working will be needed to find out what the total figure is required o the material for each product |
| :---: | :---: |
| B. Add Closing stock | 1. There will be a certain percentage of opening stock that will need to be decreased to get the closing stock figure. This will usually be given at the start of the question. <br> 2. Make sure to use the stock of raw materials figure that is given in the question. <br> 3. This stock of raw material figure will be reduce by the percentage to decrease closing stock by. |
| C. Less Opening Stock | 1. This figure will be given in the question <br> 2. Make sure to use the stock of raw materials figure that is given in the question. <br> Tip - This is the same figure that you used in b above to calculate the closing stock figure |
| D. Forecasted Purchases of Raw Material in Kgs | 1. This figure is usually calculate by using the opening stock figure and taking it away from the figure above it |
| E. Purchase price | 1. This figure will usually be given in the question <br> 2. Make sure to use the figure that say the expected prices for raw materials during the year are |
| F. Forecasted Purchases of Raw Material in € | 1. This figure is got by multiplying $D$ by $E$ |

## Required for production

## An adjustment is needed here

1. The figures for the budget production in units for both products are taken form part $A$

| Production budget for Harrington Ltd in units |  |  |
| :--- | :--- | :--- |
|  | Golden | Portland |
| Budget Production in Units | 15,110 | 8,325 |

Taken from part A
2. In the question it says the following about raw materials
'Both products use the same raw materials and skilled labour but in different quantities per unit as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |

Taken from the question
3. Use the following information to complete the working (We are interested in the material figure)
4. The working to calculate these figures will look something like this

## Workings

## Golden

## Material A

| Production Units | 15,110 | as per Part A |
| :--- | :--- | :--- |
| Required in kgs | $\underline{* 6}$ | as per question |
|  | 90,660 |  |

## Material B

| Production Units | 15,110 | as per Part A |
| :--- | :--- | :--- |
| Required in kgs | $\frac{\star 6}{135,990}$ | as per question |

## Portland

## Material A

| Production Units | 8,325 | as per Part A |
| :--- | :--- | :--- |
| Required in kgs | $\frac{\star 8}{6}$ | as per question |

## Material B

Production Units

8,325

* 12

99,900
——"
as per Part $A$
as per question

Required in kgs

|  | Material A | Material B |
| :--- | :--- | :--- |
| A. Required for Production |  |  |
| Golden | 90,660 | 135,990 |
| Portland | 66,600 | 99,900 |
|  | 157,260 | 235,890 |

NOTE - Remember to add these two figures together to get the total $(90,660+66,690=$ $157,260$ and $135,990+99,900=235,890)$

## Closing Stock

An adjustment is needed here

1. In the question it says
' 'all stock are to be decreased by 10\% from their opening levels by 31/12/2023'
2. Make sure to use the opening stock figure for raw materials that are given in the question.

Stock of raw material on 01/01/2023 are expected to be'

| Material A | $9,400 \mathrm{Kgs}$ @ $€ 5.50$ per Kg |
| :--- | :--- |
| Material B | $6,800 \mathrm{Kgs} @ € 6.50$ per Kg |

Taken from the question
3. The working to calculate these figures will look something like this

## Working

## Material A

| Opening Stock | 9,400 | as per question | Opening Stock | 9,400 |
| :--- | :--- | :--- | :--- | :--- |
| Rate of reduction | $\underline{10 \%}$ | as per question | Reduction | $\underline{940}$ |
|  | 940 |  |  | 8,460 |

## Material B

| Opening Stock | 6,800 | as per question | Opening Stock | 6,800 |
| :--- | :--- | :--- | :--- | :--- |
| Rate of reduction | $\underline{10 \%}$ | as per question | Reduction | $\underline{680}$ |
|  | 680 |  |  | 6,120 |


|  | Material A | Material B |
| :--- | :--- | :--- |
| A. Required for Production |  |  |
| Golden | 90,660 | 135,990 |
| Portland | 66,600 | 99,900 |
|  | 157,260 | 235,890 |
| B. Add closing stock | 8,460 | 6,120 |
|  | 165,720 | 242,010 |

NOTE - Remember to add these two figures together to get the total $(157,260+8,460=$ $165,720$ and $235,890+6,120=242,010)$

## Opening stock

## Take these figures from the question

1. The question says the following about the opening stock figures for raw materials
' Stock of raw materials on 01/01/2023 are expected to be'

| Material A | $9,400 \mathrm{Kgs} @ € 5.00$ per Kg |
| :--- | :--- |
| Material B | $6,800 \mathrm{Kgs} @ € 6.50$ per Kg |

Taken from the question
2. This means that the opening stock figure for raw material for material $A$ is $9,400 \mathrm{kgs}$ and for material $B$ it is $6,800 \mathrm{kgs}$

|  | Material A | Material B |
| :--- | :--- | :--- |
| A. Required for Production |  |  |
| Golden | 90,660 | 135,990 |
| Portland | 66,600 | 99,900 |
|  | 157,260 | 235,890 |
| B. Add closing stock | 8,460 | 6,120 |
|  | 165,720 | 242,010 |
| C. Less Opening Stock | $(9,400)$ | $(6,800)$ |

Forecasted purchases of raw material in Kgs

## Use the figures in your answer

1. To calculate the forecasted purchase of raw material in kgs figure you add the opening stock figure and the previous figure together

|  | Material A | Material B |
| :--- | :--- | :--- |
| A. Required for Production |  |  |
| Golden | 90,660 | 135,990 |
| Portland | 66,600 | 99,900 |
|  | 157,260 | 235,890 |
| B. Add closing stock | 8,460 | 6,120 |
|  | 165,720 | 242,010 |
| C. Less Opening Stock | $(9,400)$ | $(6,800)$ |
| D. Forecasted purchases of raw material in Kgs | 156,320 | 235,210 |

## Purchase Price

Take these figures from the question

1. The question says the following about the purchase price for raw materials
' The expected price for raw materials during 2023 are

| Material A | $€ 5.50$ per Kg |
| :--- | :--- |
| Material B | $€ 7.00$ per Kg |

Taken from the question
2. Use these figures for the purchase price - Material $A € 5.50$ and Material $B € 7.00$

|  | Material $A$ | Material B |
| :--- | :--- | :--- |
| A. Required for Production |  |  |
| Golden | 90,660 | 135,990 |
| Portland | 66,600 | 99,900 |
|  | 157,260 | 235,890 |
| B. Add closing stock | 8,460 | 6,120 |
|  | 165,720 | 242,010 |
| C. Less Opening Stock | $(9,400)$ | $(6,800)$ |
| D. Forecasted purchases of raw material in Kgs | 156,320 | 235,210 |
| E. Purchase Price | $€ 5.50$ | $€ 7.00$ |

NOTE - Remember to multiply these two figures to the forecasted of raw materials in $€$ figure

## Forecasted Purchases of Raw Materials $€$

## Use the figures in your answer

1. To calculate the forecasted purchase of raw material in $€$ figure you multiple the expected price figure and the previous figure

| Raw material purchases budget (in units and $\boldsymbol{\epsilon}$ ) for Harrington Ltd |  |  |
| :--- | :--- | :--- |
|  | Material A | Material B |
| A. Required for Production |  |  |
| Golden | 90,660 | 135,990 |
| Portland | 66,600 | 99,900 |
|  | 157,260 | 235,890 |
| B. Add closing stock | 8,460 | 6,120 |
|  | 165,720 | 242,010 |
| C. Less Opening Stock | $(9,400)$ | $(6,800)$ |
| D. Forecasted purchases of raw material in Kgs | 156,320 | 235,210 |
| E. Purchase Price | $€ 5.50$ | $€ 7.00$ |
| F. Forecasted purchase of raw material in $€$ | 859.760 | $1,646,470$ |

NOTE - Remember to include the heading - Raw material purchases budget (in units and $€$ ) for Harrington Ltd

## Tutorial Video



## PART C

Part $C$ is asking you to Prepare a production cost / manufacturing budget. The layout for this is the same layout as a manufacturing account and will look like the following

| Manufacturing budget for Harrington Ltd for year ended <br> 31.12 .23 |  |  |
| :--- | :--- | :---: |
| Direct Materials |  | $x$ |
| Opening stock raw materials |  | $\times$ |
| Add Purchase of raw materials |  | $\times$ |
|  |  | $\times$ |
| Less Closing stock raw materials |  | $\times$ |
| Cost of raw materials consumed |  |  |
| Direct Labour |  | $\times$ |
| Cost of labour |  |  |
| Variable Overheads |  | $\times$ |
| Variable Overhead |  |  |
| Fixed Overheads |  |  |
| Fixed Overheads |  |  |
| Cost of Manufacture |  |  |

## Opening stock raw materials

## An adjustment is needed here

1. We need to calculate the total figure in euros for opening stock of raw materials
2. To do this we will need a working using the information for raw material - units and price per kgs
3. The question says the following about raw materials
'Stock of raw materials on 01/01/2023 are expected to be'

| Material A | $9,400 \mathrm{Kgs}$ @ €5.00 per Kg |
| :--- | :--- |
| Material B | $6,800 \mathrm{Kgs} @ € 6.50$ per Kg |

Taken from the question

## Workings

Material A

| Kgs | 9,400 | Taken from the question |
| :--- | :--- | :--- |
| Price per Kgs | $\underline{(x) € 5.00}$ | Taken from the question |
|  | $€ 47,000$ | Opening stock raw materials |

Material B


NOTE - Remember to add these two figures together to get the total (47,000 + 44,200 = 91,200)

## Purchases raw materials

## Use the figures from Part B

1. The figure for purchases raw material has already been calculated in Part $B$
2. Use the total figure for material $A-859,760$ and material $B-1,646,470$

| Direct Materials |  |  |
| :--- | :--- | :---: |
| Opening stock raw materials |  |  |
| Material A | 47000 |  |
| Material B | 44,200 | 91,200 |
| Add Purchase of raw materials |  |  |
| Material A | 859,760 |  |
| Material B | $1,646,470$ | $2,506,230$ |

NOTE - Remember to add these two figures together to get the total $(859,760+1,646,470=$ $2,506,230)$

## Closing stock raw materials

## An adjustment is needed here

1. We need to calculate the total figure in euros for closing stock of raw materials
2. To do this we use the figure for closing stock that has been calculated in part $B$ material A 8,460 and material B 6,120
3. The question says the following about raw materials
'the expected prices of raw materials during 2023 are'

| Material A | $€ 5.00$ per Kg |
| :--- | :--- |
| Material B | $€ 7.00$ per Kg |

Taken from the question

## Workings

Material A

| Kgs | 8,460 | Taken from Part B |
| :--- | :--- | :--- |
| Price per Kgs | $\underline{(x) € 5.50}$ |  |
|  | Taken from the question |  |
|  | Closing stock raw materials |  |

## Material B

Kgs
Price per Kgs

6,120
(x) $€ 7.00$
€42,840 Opening stock raw materials

| Direct Materials |  |  |
| :--- | :--- | :---: |
| Opening stock raw materials |  |  |
| Material A | 47000 |  |
| Material B | 44,200 | 91,200 |
| Add Purchase of raw materials |  |  |
| Material A | 859,760 |  |
| Material B | $1,646,470$ | $2,506,230$ |
| Less Closing stock raw materials |  |  |
| Material A | 46,530 |  |
| Material B | 42,640 | $(89,370)$ |

NOTE - Remember to add these two figures together to get the total $(46,4530+42,640=$ 89,370 ). Take the closing stock figure 57,570 away

## Cost of raw materials consumer

## An adjustment is needed here

1. To calculate the cost of raw materials consumer we use the following formula

Total figure for opening stock + total figure for purchases - total figure for closing stock

| Direct Materials |  |  |
| :--- | :--- | :---: |
| Opening stock raw materials |  |  |
| Material A | 47000 |  |
| Material B | 44,200 | 91,200 |
| Add Purchase of raw materials |  |  |
| Material A | $1,646,470$ | $2,506,230$ |
| Material B | 46,530 |  |
| Less Closing stock raw materials | 42,640 | $(89,370)$ |
| Material A |  | $2,508,060$ |
| Material B |  |  |
| Cost of raw materials consumed |  |  |

## Direct Labour

## An adjustment is needed here

1. We need to calculate the cost of the direct labour for making the 2 products (Use the units calculated in Part A)
2. To do this we will need a working using the information for raw material - skilled labour
3. The question says the following about raw materials
'The skilled labour rate is expected to be $£ 18.00$ per hour'
and
"both products use the same raw materials and skilled labour but in different quantities per unit as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |

Taken from the question

## Workings

Exam Tip - Make use to use hours needed (skilled Labour) and the labour rate per hour

## Golden

| Budget production in units | 15,110 | Taken from Part A |
| :---: | :---: | :---: |
| Skilled hours needed | (x) 6 | Taken from the question |
|  | 90,660 | Hours needed |
| Skilled labour rate | (x) $€ 18.00$ | Taken from the question |
|  | 1,631,880 |  |
| Portland |  |  |
| Budget production in units | 8,325 | Taken from Part A |
| Skilled hours needed | (x) 9 | Taken from the question |
|  | 74,925 | Hours needed |
| Skilled labour rate | (x) $€ 18.00$ | Taken from the question |
|  | 1,348,650 |  |


| Direct Materials |  |  |
| :--- | :--- | :---: |
| Opening stock raw materials |  |  |
| Material A | 47000 | 91,200 |
| Material B | 44,200 |  |
| Add Purchase of raw materials |  | 89,370 |
| Material A | 859,760 | $1,646,470$ |
| Material B | $2,506,230$ |  |
| Less Closing stock raw materials | 46,530 | 89,370 |
| Material A | 42,840 | $2,508,060$ |
| Material B |  |  |
| Cost of raw materials consumed |  | $1,631,880$ |

## Variable Overheads

## An adjustment is needed here

Remember - variable overhead means the more you produce a unit of a product the overheads to produce the product increase.

1. We need to calculate the total variable overheads for making the 2 products (Use the units calculated in Part A)
2. To do this we will still use the information for calculating labour cost but this time we will multiply by the variable rate instead of the skilled labour rate
3. The question says the following about variable overheads
'production overhead costs are expected to be:

| Variable | $€ 12.00$ | Per skilled labour hour |
| :--- | :--- | :--- |
| Fixed | $€ 579,550$ | Per annum |
| Taken from the question |  |  |
| and |  |  |

"both products use the same raw materials and skilled labour but in different quantities per unit as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |

Taken from the question

## Workings

## Golden

| Budget production in units | 15,110 | Taken from Part A |
| :--- | :--- | :--- |
| Skilled hours needed | $\underline{(x) 6}$ | Taken from the question |
| Skilled labour rate | 90,660 | Hours needed |
|  | $\underline{(x) € 12.00}$ | Taken from the question |
|  | $1,087,920$ |  |

Exam Tip - This is the same working as the direct labour working except, we use the variable rate per skilled labour hour

Exam Tip - Make use to use hours needed (skilled Labour) and the variable rate per skilled labour hour

## Portland

| Budget production in units | 8,325 | Taken from Part A |
| :--- | :--- | :--- |
| Skilled hours needed | $\underline{(x) 9}$ | Taken from the question |
| Skilled labour rate | 74,925 | Hours needed |
|  | $\underline{(x) € 12.00}$ | Taken from the question |
|  | 899,100 |  |


| Direct Materials |  |  |
| :--- | :--- | :---: |
| Opening stock raw materials |  |  |
| Material A | 47000 | 91,200 |
| Material B | 44,200 |  |
| Add Purchase of raw materials |  | 89,370 |
| Material A | $1,646,470$ | $2,506,230$ |
| Material B | 46,530 |  |
| Less Closing stock raw materials | 42,840 | 89,370 |
| Material A |  | $2,508,060$ |
| Material B |  |  |
| Cost of raw materials consumed | $1,631,880$ |  |
| Direct Labour | $1,348,650$ | $2,980,530$ |
| Cost of labour | $1,087,920$ |  |
| Golden | 899,100 | $1,987,020$ |
| Portland |  |  |
| Variable Overheads | Golden | Portland |

Fixed Overheads
Take these figures from the question

1. These figures are taken straight from the question
2. The question says the following about fixed overheads
'production overhead costs are expected to be:

| Variable | $€ 12.00$ | Per skilled labour hour |
| :--- | :--- | :--- |
| Fixed | $€ 579,550$ | Per annum |

Taken from the question
3. We use the figure of $€ 579,550$ as the fixed overhead figure

| Direct Materials |  |  |
| :--- | :--- | :---: |
| Opening stock raw materials |  |  |
| Material A | 47000 |  |
| Material B | 44,200 | 91,200 |
| Add Purchase of raw materials |  |  |
| Material A | 859,760 |  |
| Material B <br> Less Closing stock raw materials | $1,646,470$ | $2,506,230$ |
| Material A | 46,530 | 89,370 |
| Material B | 42,840 | 89,370 |
| Cost of raw materials consumed |  | $2,508,060$ |
| Direct Labour |  |  |
| Cost of labour | $1,631,880$ |  |
| Golden | $1,348,650$ | $2,980,530$ |
| Portland |  |  |
| Variable Overheads | $1,087,920$ |  |
| Golden | 899,100 | $1,987,020$ |
| Portland |  |  |
| Fixed Overheads | 579,550 |  |
| Fixed Overheads |  |  |

## Cost of manufacture

## An adjustment is needed here

1. To calculate the cost of manufacture we add up the following totals - cost of raw material consumed + cost of labour + variable overheads + fixed overheads

$$
2,508,060+2,980,530+1,987,020+579,550=8,055,160
$$

| Production cost／manufacturing budget for Harrington LTD for year ended 31／12／2023 |  |  |
| :---: | :---: | :---: |
| Direct Materials |  |  |
| Opening stock raw materials |  |  |
| Material A | 47000 |  |
| Material B | 44，200 | 91，200 |
| Add Purchase of raw materials |  |  |
| Material A | 859，760 |  |
| Material B | 1，646，470 | 2，506，230 |
| Less Closing stock raw materials |  | 89，370 |
| Material A | 46，530 |  |
| Material B | 42，840 | 89，370 |
| Cost of raw materials consumed |  | 2，508，060 |
| Direct Labour |  |  |
| Cost of labour |  |  |
| Golden | 1，631，880 |  |
| Portland | 1，348，650 | 2，980，530 |
| Variable Overheads |  |  |
| Golden | 1，087，920 |  |
| Portland | 899，100 | 1，987，020 |
| Fixed Overheads |  |  |
| Fixed Overheads |  | 579，550 |
| Cost of Manufacture |  | 8，055，160 |

NOTE－Remember to include the heading－Production cost／manufacturing budget for Harrington LTD for year ended 31／12／2023

## PART D

Part $D$ is asking you to prepare a budget trading account but first you must calculate the closing stock value per unit for each product (Golden and Portland). You will use the same headings as part $C$ but we will be working out the figure per unit and NOT the total figure.

## Cost Per Unit

The budget will look like the following

| Unit cost per unit closing stock |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Product 1 |  | Product 2 |
| Direct Materials |  |  |  |
| Material A | $\times$ |  | $\times$ |
| Material B | $\times$ |  | $\times$ |
| Direct Labour | $\times$ |  | $\times$ |
| Cost of labour |  |  |  |
| Variable Overheads | $x$ |  | $\times$ |
| Variable Overhead | $x$ |  | $\times$ |
| Fixed Overheads | $\times$ |  | $\times$ |
| Fixed Overheads |  |  |  |
| Cost per unit |  |  |  |

## Direct Material

## A calculation is needed here

1. To find out the figure per unit for direct materials we need to use how much is needed in kgs for material A and material B and multiply it by the cost of this material per Kg
2. The information that we need from the question will be as follows
' both products use the same raw materials and skilled lobour but in different quantities per unit as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |

Taken from the question

And
'The expected price for raw materials during 2023 are'

| Material A | $€ 5.50$ per kg |
| :--- | :--- |
| Material B | $€ 7.00$ per kg |

Taken from the question

## Workings

Golden

## Material A

| Kgs per unit | 6 | Taken from question |
| :--- | :--- | :--- |
| Price per kg | $(x) € 5.50$  <br>  $€ 33$ | Taken from question |

## Material B

| Kgs per unit | 9 | Taken from question |
| :--- | :--- | :--- |
| Price per kg | $\underline{(x) € 7.00}$ | Taken from question |

Portland

## Material A

| Kgs per unit | 8 | Taken from question |
| :--- | :--- | :--- |
| Price per kg | $(x) € 5.50$  <br>  $€ 44$ | Taken from question |

## Material B

| Kgs per unit | 12 | Taken from question |
| :--- | :--- | :--- |
| Price per kg | $\underline{(x) € 7.00}$ |  |
|  | $€ 84$ | Taken from question |


|  | Golden |  | Portland |
| :--- | :---: | :---: | :---: |
| Direct Materials |  |  |  |
| Material A | 33 |  | 44 |
| Material B | 63 |  | 84 |

## Direct Labour

A calculation is needed here

1. To find out the figure per unit for direct labour we need to multiply the skilled hours needed by the skills hours rate
2. The information that we need from the question will be as follows
' both products use the same raw materials and skilled lobour but in different quantities per unit
as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |
| Taken from the question |  |  |

'The skilled labour rate is expected to be $€ 18.000$ per hour'

## Workings

Golden
Skilled labour required
Skilled labour rate

6
(x) $€ 18.00$ €108

Tip - Remember to use the skilled labour hours for both products

Portland

| Skilled labour required | 9 | Taken from question |
| :--- | :--- | :--- |
| Skilled labour rate | $\underline{(x) € 18.00}$ | Taken from question |


|  | Golden |  | Portland |
| :--- | :---: | :---: | :---: |
| Direct Materials |  |  |  |
| Material A | 33 |  | 44 |
| Material B | 63 |  | 84 |
| Direct Labour | 108 |  | 162 |
| Cost of labour |  |  |  |

## Variable Overheads

## A calculation is needed here

1. To find out the figure per unit for variable overhead we need to multiply the skilled hours needed by the variable overhead rate per product
2. The information that we need from the question will be as follows
' both products use the same raw materials and skilled lobour but in different quantities per unit
as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |

Taken from the question
And
'Production overhead costs are expected to be:'

| Variable | $€ 12.00$ | Per skilled labour hour |
| :--- | :--- | :--- |
| Fixed | $€ 579,550$ | Per annum |

Taken from the question

## Workings

Golden
Tip - Remember to use the skilled labour hours for both products

Skilled labour required
Variable rate per skilled labour hour
$(x) € 12.00$ € 72

## Portland

Skilled labour required 9
Variable rate per skilled labour hour
(x) $€ 12.00$
€108

Taken from question Taken from question

|  | Golden |  | Portland |
| :--- | :---: | :---: | :---: |
| Direct Materials |  |  | 44 |
| Material A | 33 |  | 84 |
| Material B | 63 |  |  |
| Direct Labour | 108 |  | 162 |
| Cost of labour |  |  | 108 |
| Variable Overheads | 72 |  | 4 |
| Variable Overhead |  |  |  |

## Fixed Overheads

A calculation is needed here

1. To find out the figure per unit for fixed overhead we need divide the figure for fixed overheads by the total hours needed to product a unit of Golden and Portland.
2. The information that we need from the question will be as follows

Production overhead costs are expected to be:'

| Variable | $€ 12.00$ | Per skilled labour hour |
| :--- | :--- | :--- |
| Fixed | $€ 579,550$ | Per annum |

Taken from the question
And
' both products use the same raw materials and skilled lobour but in different quantities per unit as follows'

|  | Golden | Portland |
| :--- | :--- | :--- |
| Material A | 6 kgs | 8 kgs |
| Material B | 9 kgs | 12 kgs |
| Skilled Labour | 6 Hours | 9 Hours |

Taken from the question
3. Remember the budget production in units will be taken from part A-Golden 15,110 units and Portland 8,325 units

Note - The formula needed is

Fixed overheads
Total Hours

Tip - Total hours $=$ budget production units * skilled labour

## Working

Formula
Fixed overheads
Total Hours
Total Hours per unit
Golden

Tip - Remember to use the skilled labour hours for both products

| Units required | 15,110 |
| :--- | :--- | Taken from Part A

Portland

| Units required | 8,325 | Taken from Part A |
| :--- | :--- | :--- |
| Skilled labour | $\star$ <br> ( 9 | Taken from question |
| Total Hours needed | 74,925 |  |

Total hours required for Golden and Portland

$$
90,660+74,925=165,585
$$

Formula
$=$

Fixed Overhead per unit $€ 3.50$

## Golden

| Skilled Hours | 6 |
| :--- | :--- |
| Fixed Overhead per unit | (夫) $3.50^{21}$ |
| Fixed overhead per unit | 21 |

## Fixed overheads

Total Hours

579,550
165,585
$€ 3.50$

Taken from question Taken from above

Tip - Remember to use the skilled labour hours for both products

## Portland

| Skilled Hours | 9 | Taken from question |  |
| :--- | :--- | :--- | :--- |
| Fixed Overhead per unit | (*) 3.50 | Taken from above |  |
| Fixed overhead per unit | 31.50 |  |  |


|  | Golden |  | Portland |
| :--- | :---: | :---: | :---: |
| Direct Materials |  |  | 44 |
| Material A | 33 |  | 84 |
| Material B | 63 |  | 162 |
| Direct Labour | 108 |  | 108 |
| Cost of labour | 72 |  |  |
| Variable Overheads |  |  | 31.50 |
| Variable Overhead | 21 |  |  |
| Fixed Overheads |  |  |  |
| Fixed Overheads |  |  |  |

Take the figures from the question

1. To calculate the cost per unit figure for Golden and Portland we add the following total figures - Direct materials + direct labour + variable overheads + fixed overheads

| Unit cost per unit closing stock |  |  |  |
| :--- | :---: | :--- | :---: |
|  | Golden |  | Portland |
| Direct Materials |  |  |  |
| Material A | 33 |  | 44 |
| Material B | 63 |  | 84 |
| Direct Labour | 108 |  | 162 |
| Cost of labour |  |  |  |
| Variable Overheads | 72 |  | 108 |
| Variable Overhead | 21 |  | 31.50 |
| Fixed Overheads | 297.00 |  | 429.50 |
| Fixed Overheads |  |  |  |
| Cost per unit |  |  |  |

## Budget Trading Account

The second part of Part $D$ is to prepare the budget trading account is the same layout as Question 1 and will look something like this. Remember to use the closing stock figure per unit from the above working

| Budget trading account for Harrington LTD for year ended |  |  |
| :--- | :---: | :---: |
| 31/12/2023 |  | $\times$ |
| Sales | $x$ |  |
| Less Cost of Sales | $x$ |  |
| Opening stock | $x$ | $(x)$ |
| Add Cost of manufacturing | $x$ | $x$ |
| Less Closing Stock |  |  |
| Gross Profit |  |  |

## A calculation is needed here

1. To calculate the sales revenue figure for the trading account we need to use the expected units to be sold and multiply it by the price to be charged for each product
2. This information will usually be given at the start of the question
3. The information that we need from the question will be as follows
'It expects to sell two products - Golden at €360 and Portland at €410'
And

|  | Golden | Portland |
| :--- | :---: | :---: |
| Sales are expected to be: | 15,200 units | 8,400 units |

## Working

Golden

| Expected Sales | 15,200 | taken from question |
| :--- | :--- | :--- |
| Selling Price | $\underline{€ 360}$ | taken from question |
|  | $€ 5,472,000$ | Sale revenue for Golden |

## Portland

| Expected Sales | 8,400 | taken from question |
| :--- | :--- | :--- |
| Selling Price | $\underline{€ 410}$ |  |
|  | taken from question |  |
|  | $€ 3,444,000$ | Sale revenue for Golden |

Total Sales Revenue
Golden
Portland
Total
€5,472,000 see working above
$€ 3,444,000$ see working above
€8,916,000 Total sale revenue figure

| Sales |  |  | $8,916,000$ |
| :--- | :--- | :--- | :--- |

## Opening Stock

## A calculation is needed here

1. To calculate the total opening stock figure for the trading account we needed to use the opening stock figure in the question and multiply it by the value of the opening stock
2. The information that we need from the question will be as follows
'stock of finished good on 01/01/2023 are expected to be:'

## Working

## Golden

Expected opening stock
taken from question
Value of opening stock
(*) $€ 210$ taken from question
€189,000
taken from question
taken from question
Opening stock value Golden

Tip - Remember to use the figure for finished goods and not raw materials

## Portland

Expected opening stock
Value of opening stock

750
(*) $€ 290$ taken from question
€217,500
taken from question

Opening stock value Golden

## Total opening stock figure

| Golden | €189,000 | see working above |  |
| :---: | :---: | :---: | :---: |
| Portland | € 217,500 | see working above |  |
| Total | €406,500 | Total opening stock figure |  |
|  | Sales |  | 8,916,000 |
|  | Less Cost of Sales |  |  |
|  | Opening stock | 406,500 |  |

## Purchases (Cost of manufacture)

Take these figures from part $C$

1. The figure for purchases (cost of manufacture) is already calculate as part of Part $C$ € $8,055,160$

| Sales |  |  | $8,916,000$ |
| :--- | :--- | :--- | :--- |
| Less Cost of Sales |  |  |  |
| Opening stock |  | 406,500 |  |
| Add Cost of Manufacture |  | $(+) 8,055,160$ |  |
|  |  | $8,461,660$ |  |

Note-Remember to add the opening stock figure and the cost of manufacture figure together $€ 406,500+€ 8,055,160=€ 8,461,660$

## Closing Stock

A calculation is needed here

1. To calculate the closing stock figure we use the closing stock figures from Part $A$ (Golden - 810 and Portland - 675)
2. We then multiply these figures by the cost per unit figure for both products. These were calculate at the start of this part (Part D)

## Working

Golden

| Closing stock | 810 | taken from Part A |
| :--- | :--- | :--- |
| Cost per unit | $\frac{\left.{ }^{\star}\right) € 297}{}$ | Calculate at the start of this part (Part D) |
|  | $€ 240,570$ | Closing stock value Golden |

## Portland

| Closing stock | 675 | taken from Part A |
| :--- | :--- | :--- |
| Cost per unit | $\frac{(\star) € 429.50}{}$ | Calculate at the start of this part (Part D) |
|  | $€ 289,013.50$ | Closing stock value Golden |

## Total closing stock figure

| Golden | $€ 240,570.00$ | see working above |
| :--- | :--- | :--- |
| Portland | $€ 289,013.50$ | see working above |
| Total | $€ 530482.50$ | Total opening stock figure |


| Sales |  |  | $8,916,000$ |
| :--- | :--- | :--- | :--- |
| Less Cost of Sales |  |  |  |
| Opening stock |  | 406,500 |  |
| Add Cost of Manufacture |  | $(+) 8,055,160$ |  |
|  |  | $8,461,660$ |  |
| Less Closing Stock |  | $(530,482.50)$ | $7,931,177.50$ |

NOTE - Remember to take the closing stock figure away from the previous figure ( $€ 8,461,660$ $€ 530,482.50)$

Take the figures from the question

1. To calculate the Gross Profit figure for Golden and Portland take these two figure away from each other 8,926,000-7,931,177.50

| Budget trading account for Harrington Ltd for year ended <br> 31.12.2023 |  |  |  |
| :--- | :--- | :--- | :--- |
| Sales |  | $8,916,000$ |  |
| Less Cost of Sales |  | 406,500 |  |
| Opening stock |  | $8,461,660$ |  |
| Add Cost of Manufacture |  | $(530,482.50)$ | $7,931,177.50$ |
|  |  |  | $984,822.50$ |
| Less Closing Stock |  |  |  |
| Gross Profit |  |  |  |

NOTE - Remember to include the heading - Budgeted Trading account Harrington Ltd for year ended 31.12.23

## Tutorial Video



## PART E

This is the theory part of the question and includes the following
(i) Outline why budgetary control is necessary in an organisation

1. Budgets are a road map for a business and help them to achieve their objectives
2. It provides direction and motivation to staff to help them achieve their targets
3. To help identify future costs and revenue in order to plan cash inflows and control costs
4. To help production level to be achieved by preparing a raw materials budget
5. To ensure that there is enough staff in all areas so that order will be meet
6. To ensure that resources are use effectively and to be capable to changing in circumstances
7. To compare budget figure with actual figures and identify variances
(ii) In relation to budgets, explain what is meant by a favourable variance and give an example of how it might arise in the direct costs of a manufacturing firm

A favourable variance occurs when actual cost are less that budget costs.

A favourable cost might arise for the following reasons

1. The purchase of raw materials is less than expected because of economics of scale or discounts on early payments
2. Less labour wages were required due to improved productivity from employees
3. Hire cost of special equipment is less than expected due to a surplus of equipment on the rental market
4. Patent royalties costs are less than anticipated due to the patents coming close to their retirement date

## Tutorial Video



