

# IMPROVE YOUR BUSINESSES

## Costing



**IMPROVE  
YOUR BUSINESS**

# **COSTING**

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### **About the Start and Improve Your Business (SIYB) Programme**

The Start and Improve Your Business (SIYB) programme is a management-training programme developed by the International Labour Organization (ILO) with a focus on starting and improving small businesses as a strategy for creating more and better employment for women and men, particularly in emerging economies. With an estimated outreach in over 100 countries, it is one of the world's largest programmes in this field.

The programme has four inter-related packages - Generate Your Business Idea (GYB), Start Your Business (SYB), Improve Your Business (IYB) and Expand Your Business (EYB).

The ILO implements the programme using a three-tier structure comprising Master Trainers, Trainers and the end beneficiaries – potential and existing entrepreneurs. The Master Trainers licensed by the ILO are responsible for developing the capacity of the Trainers to effectively conduct SIYB training. Thereafter, the Trainers train entrepreneurs in SIYB packages. The ILO plays a critical role in identifying and disseminating best practices, carrying out trainings, monitoring activities, performing quality control and providing technical advice on the implementation of the SIYB programme.

### **About Improve Your Business (IYB)**

Improve Your Business (IYB) is a management training programme for owners and managers of small enterprises who want to sustain their businesses, increase sales and reduce costs. It addresses the core question of how to improve the performance of your business.

IYB originates from a programme developed by the Swedish Employer's Confederation for local small and medium entrepreneurs. Later, the methods and materials were adapted by the ILO to meet the needs of people running small businesses in developing countries.

The IYB training programme is supported by a set of six manuals (marketing, costing, buying and stock control, record keeping, planning for your business, and people and productivity). These manuals can be taught individually or all combined in a full course. If the full course using all the manuals is delivered, the duration is approximately seven days. The IYB training uses an active, problem-centred learning approach to small business management through, for example, short cases and graphic illustrations.

The IYB Costing manual explains entrepreneurs how to calculate the cost of the goods or services offered by their business.

## **Authors and acknowledgements**

The IYB Costing manual is a result of a collective effort and reflects the experience and knowledge gathered by implementing the programme for nearly three decades. In particular, the contributions of SIYB Master Trainers and Trainers who have tested, designed and implemented the programme in different countries over the years have been invaluable. There are many colleagues from the network of SIYB practitioners, consulting firms and in the ILO, whose experience, support and constructive suggestions made the publication of this training manual possible.

This manual is based on the materials originally developed in 1994 by the ILO SIYB Regional Project Office in Harare, Zimbabwe, where it was written and edited by Mats Borgenvall, Cecilia Palmer and Barbara Murray.

The author team of the 2015 version, which revised the existing text and wrote new chapters to include recent thinking in enterprise development and related fields comprises Duong Thi Kim Chung and Pranati Mehtha. Stylistic and language editing were carried out by Steve Raymond.

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# INTRODUCTION

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## 1. What is this manual about?

Knowing your costs helps you set the appropriate prices so that your business makes a profit. It also helps you to control costs, make decisions and plan for the future. The purpose of this manual is to teach you how to calculate the cost of your goods or services. In this manual, you will examine different types of costs and learn how different businesses calculate their costs.

## 2. Who should read this manual?

Costing is one of the manuals in the Improve Your Business (IYB) series. It is useful for entrepreneurs who run small enterprises and who wish to develop their businesses, increase sales and reduce costs.

The costing method discussed in this manual is based on business records. Therefore, this manual is recommended for entrepreneurs whose businesses have kept business records. If your business has not kept business records, please refer to Start Your Business (SYB) manual for a simpler way of costing.

## 3. Objectives of this manual

When you have completed this manual, you should be able to:

- Identify the different types of costs for running a business
- Use the information from your business record books to calculate the cost of your goods or services
- Use the Product Costing Form to calculate the cost of a good or service

## 4. How to use this manual?

In this manual you will find:

- **Stories of businesses:** Compare these examples with your own business and use them to improve the performance and profitability of your business.
- **Activities:** Practical exercises in the middle of each part that help you to proactively think about the concepts and how to apply them to your own business.

- **Summary:** This is provided at the end of each part. Use it to review the key points.
- **Assessment:** This is provided at the end of each part. Answering the questions will help you to assess how well you understand the content presented in that part.
- **“Can You Help?”:** These are exercises at the end of the manual. These exercises will give you an opportunity to apply your new knowledge and skills in specific situations. By doing these exercises, you will find out how much you have learned from the whole manual.
- **Action Plan:** Fill in and use the Action Plan near the end of the manual. This will help you to put your new knowledge into practice.
- **Answers:** Answers to Assessments and “Can You Help?” exercises are given at the end of the manual. Finish each exercise before you look at the answer.
- **Useful Business Words:** You can look up the meaning of business words that you do not understand. This part is at the end of the manual.
- **Important notes:** Each of these notes has important information. Use this information to the best of your ability. You can find these notes in the middle of different parts of the manual.

Several icons are used within the manual to help guide your study. Examples of the icons and their meanings are listed below:



When you see this icon, you have activities to do or questions to answer.



When you see this icon, you find an answer for your activities and assessments here.



When you see this icon, it signifies that the information in this part is extremely important.



When you see this icon, you have to complete assessments that help you measure what you have learned.



When you see this icon, you will know you have just completed one part and the important ideas that were presented are being summarized here.

When you see this icon, it tells you where to find more information or what to do.

# KNOW YOUR COSTS



How does *Makara Pottery* price its tea mugs?

.....

.....

.....

Is there a problem with the way *Makara Pottery* prices the tea mugs? Please explain your answer.

.....

.....

.....

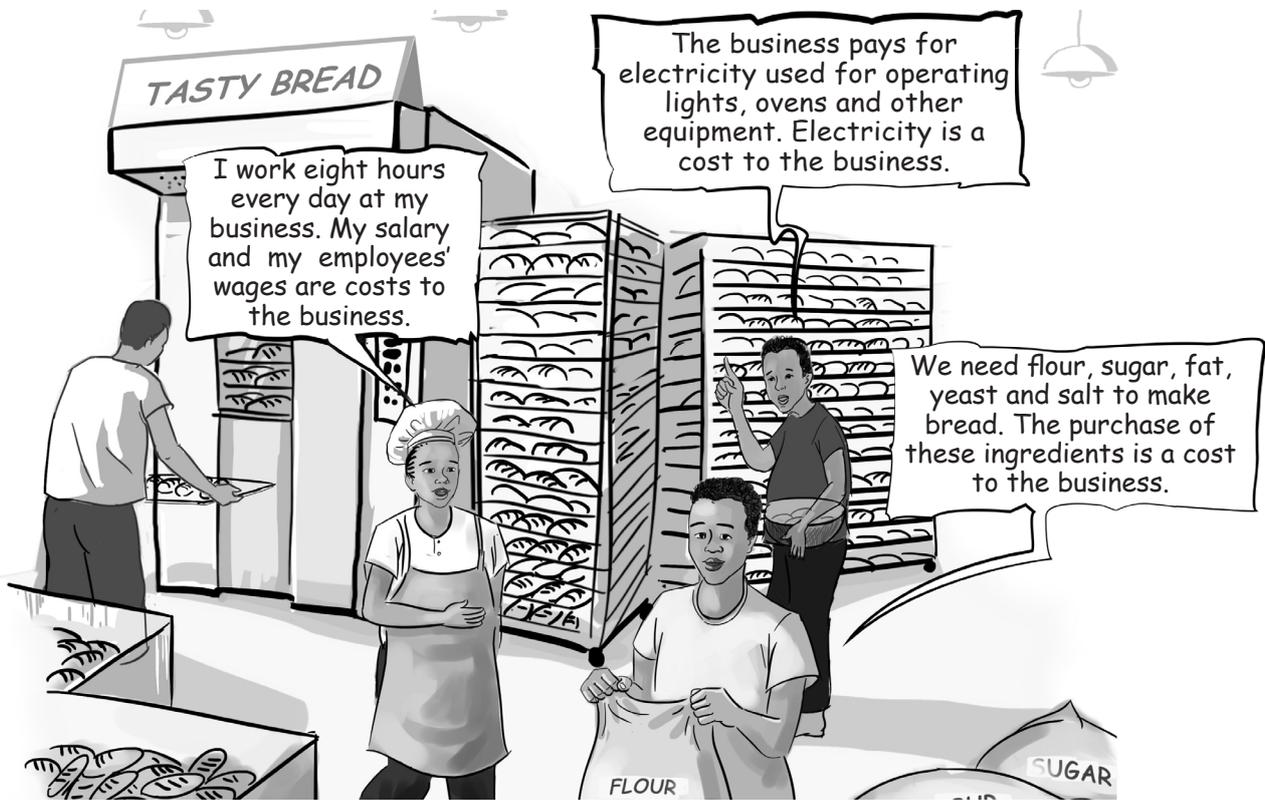
Perhaps you would agree with the following:

To set its price, Makara checks what the competition charges for similar tea mugs and then she sets a price lower than that of the other potteries.

Yes, there is a problem with the way *Makara Pottery* prices the tea mugs. To ensure that the sales of tea mugs is profitable, Makara should also find out how much it costs to produce one tea mug and make sure that the price set for the good is higher than the costs.

## 1. What are costs?

Every business has **costs**. Costs are the money your business spends to make and sell your goods or services. Here are some examples of costs at *Tasty Bread*:



### ACTIVITY 1

What are the costs in your business?

.....

.....

.....

---

## 2. What is costing?

Costing is the calculation of all of the costs that go into making and selling a good or providing a service. This manual will teach you how to do costing. But before you can do costing, it is necessary to understand the different types of costs in your business.

## 3. Different types of costs

Costs of a business can be broadly classified into two categories based on their sources: Production and Non-Production Costs. Separating Production Costs from Non-Production Costs helps businesses find a true picture of the costs to make a good or provide a service.

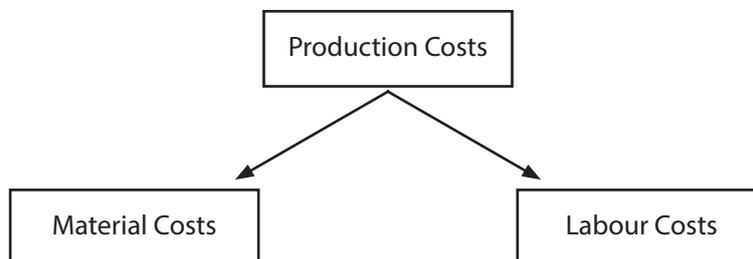
**Production Costs** are those that are incurred in the production of your goods or the provision of your services. Raw materials, packaging and workers' wages are examples of Production Costs. These costs often fluctuate with production volume, sales volume or service provision.

**Non-Production Costs** are all other costs, except Production Costs, that you have in order to run your business. For example, rent, utilities and salaries for administrative functions are all Non-Production Costs. These costs do not fluctuate in direct proportion to the number of products being produced or sold and tend to remain constant over a given period of time. Non-Production Costs are generally called **Overhead Expenses**.

### 3.1 Production Costs

Production Costs can be divided into two different types:

- Material Costs
- Labour Costs



**Material Costs** are the money your business spends on the parts and materials that are **related to the production of your goods or provision of your services**.

Here are some examples of Material Costs for different businesses:

At *Beauty Hair Salon*, perm lotion and neutralizer are products that are used for each perm, so the cost of the perm lotion and the neutralizer is a Material Cost for *Beauty Hair Salon*.



At *Kalima Metal*, sheets of metal, hinges and bolts are used to make door frames, so the cost of metal sheet, hinges and bolts is a Material Cost for *Kalima Metal*.



*Simba Bookshop* does not make products. The bookshop buys stationery, books and other goods to resell. For retailers or wholesalers, the cost of buying goods to resell is a Material Cost.



“

For retailers and wholesalers, the cost of buying goods to resell is a Material Cost.



”



What Material Costs do you have in your business?

.....

.....

.....

**Labour Costs** are the amount your business spends on wages, salaries and benefits for the employees and owners **who work in the production of your goods or the provision of your services.**



At *Beauty Hair Salon*, Phiri's job is to create hairstyles. Phiri's salary is a Labour Cost for the business.



At *Kalima Metal*, the employees' job is to produce metal goods. The wages Kalima pays to his employees are Labour Costs for the business.



## ACTIVITY 3

Does your business have employees working to make goods and provide services? What Labour Costs does your business have?

.....

.....

.....

### 3.2 Non-Production Costs

In addition to Production Costs, all businesses also have costs for running the business. These costs are Non-Production Costs or **Overhead Expenses**.

All costs that not related to the production process are Overhead Expenses. Costs for buildings, rent, electricity, water, maintenance, repairs, service, insurance, stationery, licences, interest on loans and other financial services fees are some examples of Overhead Expenses.

The transport of materials or goods, visiting suppliers or customers and delivering goods to customers are all Overhead Expenses.



The cost of wages for employees or owners who do not work directly in the production of goods or services is an Overhead Expense. Some other examples of salaries that are Overhead Expenses are those for accountant, sales staff, messengers, cleaners and security guards.



Retailers and wholesalers like *Simba Bookshop* do not have any employees working to make products. Therefore, the cost of salaries, wages and benefits paid to the employees and to the owners themselves are Overhead Expenses.



Equipment is all the machinery, tools, workshop fittings, office furniture, etc. that a business needs. Equipment loses value every year and is a cost to the business, so this is an Overhead Expense. The loss in value of equipment is called **depreciation**. Depreciation is calculated by dividing the total purchase price by the number of years (or months) you expect to use it.

$$\text{Depreciation} = \frac{\text{Total purchase price}}{\text{Number of years (or months) to be used}}$$

For example, your business buys a desktop computer. The cost of the purchase is \$600 and you expect to use it for five years. The cost of using the computer for one year (or yearly depreciation) will be:

$$\text{Yearly depreciation} = \frac{\$600}{5} = \$120$$

To estimate how long you expect to use your equipment, you can:

- Base the estimate on your own experience
- Ask suppliers
- Ask the owners of other businesses using the same or similar equipment



Some countries have fixed rules for depreciation. These rules tell you the number of years for which a piece of equipment must be depreciated. Check with the tax authority or an accountant to find out if your country has fixed depreciation rules.



## ACTIVITY 4

What equipment do you have at your business? Do you calculate the depreciation for that equipment?

.....

.....

.....

For some businesses, particularly those in manufacturing, depreciation costs are high. Therefore, it is important to include depreciation costs when calculating the cost of your goods.



What Overhead Expenses do you have in your business?

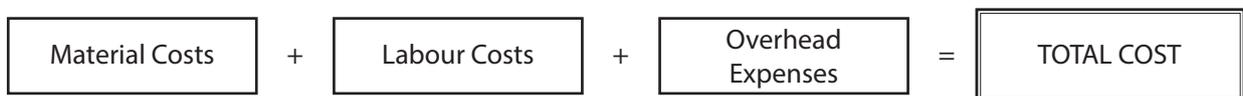
.....

.....

.....

If you are a retailer or wholesaler, all your costs, except the costs of buying goods to resell, are Overhead Expenses.

Now you can see that there are different types of costs that make up the total cost of a good or service.



You need to know about all the different costs in your business to be able to do an accurate costing. You must decide:

- Which are Material Costs?
- Which are Labour Costs?
- Which are Overhead Expenses?

**4. How can costing improve your business?**

- **Costing helps you to set prices.**  
To sell your goods or services, you have to set competitive prices. To ensure the sales of your goods or services is profitable, you must set prices that are higher than the cost to produce the goods or services. When you know all of your costs, you can set the appropriate price for your good or service to make your business profitable.
- **Costing helps you to reduce and control your costs.**  
Knowing all your costs helps you to find ways to make your business more cost-efficient.
- **Costing helps you to make better decisions about your business.**  
When you know the total cost of each type of good or service, you can make more informed decisions about which goods or services to produce or promote most heavily so that your business makes the highest profit.
- **Costing helps you to plan for the future.**  
When you know all your costs, you can make plans for the direction of your future business. For example, you need to know all your costs in order to make an accurate Sales and Marketing Plan, a Production and Cost Plan or a Cash Flow Plan.



## SUMMARY

Every business has **costs**. The costs are all the money your business spends to make and sell your goods or services. **Costing** is the way you calculate those costs and it is essential for every business.

Costs of a business can be broadly classified into two categories based on their sources:

- Production Costs: All the costs that are related to the production of goods or the provision of services.
- Non-Production Costs: All the other costs for running the business. These costs are generally called Overhead Expenses.

Production Costs can be further divided into two groups:

- Material Costs: The money your business spends on parts and materials that are related to the production of your goods or provision of your services.
- Labour Costs: The amount your business spends on wages, salaries and benefits for the employees and owners who are working in the production of your goods or the provision of your services.

You must understand the different types of costs to be able to calculate the total cost of any good or service your business makes or sells:

$$\boxed{\text{Material Costs}} + \boxed{\text{Labour Costs}} + \boxed{\text{Overhead Expenses}} = \boxed{\text{TOTAL COST}}$$

Costing helps your business to:

- Set your prices
- Reduce and control your costs
- Make better decisions about your business
- Plan for the future



## ASSESSMENT 1

You have just completed Part I of this manual. Do the two exercises below to check your understanding. Finish the exercises before comparing your answers with those on page 73.

### 1. Practise your business language

Some words are missing from this story. Complete the sentences by choosing the correct word or words from the list below. Write the missing words in each space next to the number in brackets.

Material Costs

Labour Costs

Overhead Expenses

Total cost

Depreciation

*Kalima Metal* makes products out of metal. For example, they make window frames, door frames, buckets and feeders. A large building company has asked *Kalima Metal* for a quotation on window frames.

When Kalima prepares his quotation, he first works out how much money is needed to buy metal rods, bolts and hinges to make the window frames. These costs are called (1) .....

Next, Kalima calculates the cost of the wages for the employees who will make the window frames. These costs are called (2) .....

Kalima also includes the cost of buying equipment, such as his welding arc, which is used in the production process. A welding arc is expensive and can be used for many years. Each year it will lose value. Kalima divides the cost of the welding arc by the number of years (or months) he expects to use it. He describes the amount as (3).....

Before he can work out the (4)..... of a window frame, Kalima makes sure he has added up and included the cost of rent, electricity and all the other costs of running his business. Kalima puts those costs under (5).....because they are not related to the production of window frames.



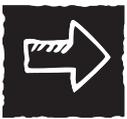
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**2. Which one is correct?**

Circle the best ending for each sentence:

1. Costing is the way you...
  - a. work out what price you must set to make a profit.
  - b. find out the costs of your competitors.
  - c. calculate the total cost of making or selling a good or providing a service.
  
2. In costing, the salaries and benefits that retailers and wholesalers pay for their employees are considered...
  - a. Overhead Expenses.
  - b. Labour Costs.
  - c. Material Costs.
  
3. The owner of *Tasty Bread* spends a third of her time supervising the employees who are baking the bread. She should include a third of her own salary under...
  - a. Labour Costs.
  - b. Overhead Expenses.
  - c. Material Costs.

# COSTING FOR A MULTIPLE PRODUCT MANUFACTURER OR SERVICE OPERATOR



*If you are a single product manufacturer or service operator, turn to page 35.*

*If you are a retailer or wholesaler, turn to page 47.*

Gitau and Mario own a business called *Reliable Tailors*. Their business makes two types of products: dust coats and overalls. They are going to explain the way they do costing to their friend, Mutebi, who wants to improve costing for his business.



## 1. Classification of costs

*Reliable Tailors* is a multiple product manufacturer. To calculate how much each of its goods costs to produce, the business owners have to find the total cost for each type of good.

In order to calculate Production Cost for each particular product, multiple product manufacturers or service operators divide their **Production Costs** into three groups: **Direct Material Costs**, **Direct Labour Costs** and **Indirect Manufacturing Expenses**.

**Direct Material Costs** are all the Material Costs that are:

- Easy to trace to a particular good or service.
- A substantial enough cost that adds a considerable amount to the total cost. A cost will be considered substantial if the time and effort involved allocating it to a particular good or service would be worth the benefit of accurate cost allocation.

At *Reliable Tailors*, the cost of fabric and buttons is a Direct Material Cost.

**Direct Labour Costs** are all the Labour Costs that are:

- Easy to trace to a particular good or service.
- A substantial enough cost that adds a considerable amount to the total cost.

At *Reliable Tailors*, Chika's job is sewing dust coats. His wage is a Direct Labour Cost.

**Indirect Manufacturing Expense** is the amount of money a business spends on the materials or labour **related to the production** of goods or services, but that cannot be considered as Direct Labour Cost or Direct Material Cost. In other words, Indirect Manufacturing Expenses include all Production Costs which are either difficult to trace to a particular product or insubstantial.

Look what happens at *Reliable Tailors*:

At *Reliable Tailors*, thread is used to make dust coats and overalls. Thread is considered an Indirect Manufacturing Expense because:

- The amount of thread used could possibly be allocated to each dust coat. But it is not easy and the cost of the time and effort involved in calculating such an insignificant item would outweigh any benefit.
- The cost of the small amount of thread used to make one dust coat is not enough to add a significant amount to the total cost of a dust coat.





At *Reliable Tailors*, Mario sews dust coats and supervises the production of all garments. His salary, therefore, includes two parts. One part, for the time he spends sewing dust coats, is a Direct Labour Cost. The other part, for the time he spends supervising production, is counted as an Indirect Manufacturing Expense. Mario spends half of his time supervising production, but it is difficult to divide the supervision time between dust coats and overalls, therefore this part of his salary cannot be allocated exactly to each dust coat or overall.

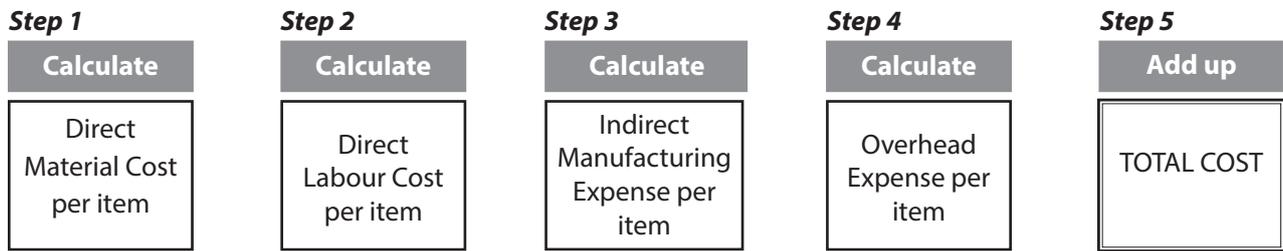
The labour involved in the production process but the time they spend cannot be allocated directly to a particular product or their salaries are insignificant compared to the total cost of each product they make is called **Indirect Labour**. All the money a business spends on wages, salaries and benefits for indirect labour are **Indirect Labour Cost**. Indirect Labour Cost is part of Indirect Manufacturing Expense. Part of Mario's salary which is for supervision of dust coats and overalls, therefore, will be considered as Indirect Labour Cost.

Multiple product manufacturers or services operators also have **Overhead Expenses**. At *Reliable Tailors*, depreciation and rent are examples of Overhead Expenses. If *Reliable Tailors* were to take a loan for their business, then any interest payment will be included under Overhead Expenses.

So, for multiple product manufacturers or services operators, there are four different types of costs that make up the total cost of a product or service. For example, the following are some of the costs to make a dust coat at *Reliable Tailors*:

Direct Material Costs	+	Direct Labour Costs	+	Indirect Manufacturing Expenses	+	Overhead Expenses	=	TOTAL COST
-----------------------	---	---------------------	---	---------------------------------	---	-------------------	---	------------

Multiple product manufacturers or services operators use a **Product Costing Form** to calculate the cost to produce each of their products. The Product Costing Form follows the five steps:



## 2. Product Costing Form

The next page has a Product Costing Form for multiple product manufacturers and service operators. Gitau and Mario show Mutebi how to do the calculations for each step and how to fill in a Product Costing Form.



*Reliable Tailors is a multiple product manufacturer. If you are a multiple service operator, use the same five steps on the Product Costing Form. On pages 66 – 69 there is an exercise for a service operator.*

**PRODUCT COSTING FORM**  
(for multiple product manufacturers and service operators)

Product:

**1. DIRECT MATERIAL COST PER ITEM**

**Step 1**

Total Direct Material Cost per month (1)		
Number of items produced per month (2)		
Direct Material Cost per item (3) = (1)/(2)		

**2. DIRECT LABOUR COST PER ITEM**

**Step 2**

Total Direct Labour Cost per month (4)		
Direct Labour Cost per item (5) = (4)/(2)		

**3. INDIRECT MANUFACTURING EXPENSE PER ITEM**

**Step 3**

Total Indirect Manufacturing Expense per month (6)		
Total direct cost of the entire business per month (7)		
Indirect Manufacturing Expense per direct cost (8) = (6)/(7)		
Total direct cost per item (9) = (3) + (5)		
Indirect Manufacturing Expense per item (10) = (8) x (9)		

**4. OVERHEAD EXPENSE PER ITEM**

**Step 4**

Monthly Overhead Expense (11)		
Overhead Expense per direct cost (12) = (11)/(7)		
Overhead Expense per item (13) = (12) x (9)		

**Step 5**

**5. TOTAL COST PER ITEM (14) = (13) + (10) + (5) + (3)**

--

### 3. Get cost data



To fill in the Product Costing Form, *Reliable Tailors* uses the information from their Detailed Costs Record (see next page).



See the *IYB RECORD KEEPING MANUAL* to learn more about the Detailed Costs Record.

Gitau explains her Detailed Costs Record as follows:

#### 3.1 Direct Material Costs

The raw materials that *Reliable Tailors* uses are fabric, buttons and thread. All of these materials are part of their goods. Fabric and buttons are considered **direct materials** because their costs are easy to calculate and allocate to a particular good.

Look at *Reliable Tailors'* Detailed Costs Record. In the "Direct Material Costs" columns are the costs for the fabric and buttons purchased in September. The Direct Material Costs are recorded separately for each of their two products: dust coats and overalls. White cotton drill and big buttons are for the dust coats, while black cotton drill and small buttons are for the overalls.



## DETAILED COSTS RECORD

Sep 20xx

(Unit: US\$)

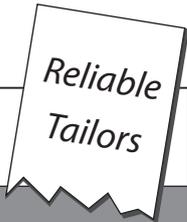
Date	Details	Voucher No.	Direct Material Costs		Direct Labour Costs		Indirect Manufacturing Expenses	Overhead Expenses
			Dust coats	Overalls	Dust coats	Overalls		
1/9	Fabric (white cotton drill)	274	3,000					
3/9	Small buttons	277		20				
3/9	Big buttons	278	40					
5/9	Fabric (black cotton drill)	281		2,000				
7/9	Thread	284					5	
15/9	Electricity and water	290						20
20/9	Transport	291						10
20/9	Stationery	292						5
20/9	Telephone and postage	293						3
25/9	Scissors	295						4
30/9	Wages	298			480	180	810	730
30/9	Interest on loans	299						30
30/9	Depreciation							175
	<b>Total</b>	<b>298</b>	<b>3,040</b>	<b>2,020</b>	<b>480</b>	<b>180</b>	<b>815</b>	<b>977</b>

### 3.2 Direct Labour Costs



You can learn more about the Salary Register in the *IYB RECORD KEEPING MANUAL*.

## SALARY REGISTER



Month: September 200xx		(Unit: US\$)	
Name	Wages	Social and Health Insurance	Total
<b>PRODUCTION LABOUR</b>			
<b>Direct Labour</b>			
M.Mario (owner), sewing dust coats	240	60	300
N.Chika, sewing dust coats	144	36	180
F.Habi, sewing overalls	144	36	180
<b>Total Direct Labour Costs</b>			<b>660</b>
<b>Indirect Labour</b>			
M.Mario (owner), supervision	240	60	300
K. Kofi, cutting and design	192	48	240
D.Gugu, over locking	120	30	150
G.Seboni, pressing, folding, etc	96	24	120
<b>Total Indirect Labour Cost</b>			<b>810</b>
<b>NON-PRODUCTION LABOUR</b>			
R.Gitau (owner), sales, administration	480	120	600
T.Neo, delivering messages, cleaning (part-time)	50		50
P. Lisa, record keeping (part-time)	80		80
<b>Total Non-Production Labour Cost</b>			<b>730</b>

---

There are nine people working at *Reliable Tailors*, including Gitau and Mario. Six of them (Habi, Chika, Mario, Kofi, Gugu and Seboni) are involved in production.

Of the six people working in production, Habi only works on overalls, Mario and Chika only work on dust coats and the other three work on both products. Mario, however, spends only half of his time sewing dust coats. He spends the other half of his time supervising the production of both products.

The owners' salaries are also part of the costs in a business. It is important that the owners write down how much the business pays them. Mario and Gitau pay themselves \$600 per month, 20% of which (\$120) is for social and health insurance.

For employees who are involved in more than one function, such as production and administration, their salary should be broken down into different parts in the Salary Register, based on the proportion of time they spend on each function. Mario's job includes sewing dust coats and supervising the production. He spends half of his time for each task, so in the Salary Register his salary is broken down into two parts: half is direct labour and the other half is indirect labour.

The salaries of Chika and half of Mario's salary, are considered Direct Labour Costs. The total Direct Labour Cost for making dust coats in September is \$480.

Total Direct Labour Cost for making dust coats	=	Mario's half salary	+	Chika's salary
\$480		\$300		\$180

Look at *Reliable Tailors'* Detailed Costs Record on page 19. In the "Direct Labour Cost" columns, note that the Direct Labour Cost for making dust coats is \$480.

### 3.3 Indirect Manufacturing Expenses

Thread is part of *Reliable Tailors'* goods. Thread is considered an **indirect material** because it is difficult to calculate the amount of thread used for a particular product and the cost of thread is minimal. Look at *Reliable Tailors'* Detailed Costs Record, the cost of the thread is listed in the "Indirect Manufacturing Expenses" column.

Kofi, Gugu and Seboni make both dust coats and overalls. Mario supervises the production of both products. It is difficult to calculate how much time they spend on each product. Their salaries are, therefore, **not** considered Direct Labour Costs but Indirect Manufacturing Expenses. In *Reliable Tailors'* Salary Register on page 21, the total Indirect Labour Cost for September is listed as \$810. In the "Indirect Manufacturing Expenses" column of their Detailed Cost Record on page 19, we can see the cost of wages is also \$810.

### 3.4 Overhead Expenses

In addition to the Production Costs above, *Reliable Tailors* has other costs, including transportation, stationery, electricity, water, telephone, postage, equipment, interest on loans, other financial fees and the salaries of people who are not involved in production.

These costs are not incurred by the production process. *Reliable Tailors* has to pay these costs even if it stops production for a month. They are, therefore, considered Overhead Expenses. We can see these costs in the "Overhead Expenses" column of *Reliable Tailors'* Detailed Costs Record.

The equipment *Reliable Tailors* uses includes scissors and sewing machines. Scissors are inexpensive, so when buying scissors, the owners of *Reliable Tailors* just write down the cost as an Overhead Expense. Sewing machines are expensive and do last for a long time, so they calculate and record the monthly depreciation as an Overhead Expense.



Reliable Tailors has four sewing machines which last for a long time. An Asset Register is used to help the owners keep track of the value of the equipment.

*Reliable Tailors*

**ASSET REGISTER**

Date: 31 December 2013

Name of asset (1)	Serial number (2)	Year bought (3)	Cost of purchase (\$) (4)	Years to be used (5)	Depreciation per year (\$) (6)	Accumulated depreciation (\$) (7)	Remaining value (\$) (8)
Sewing machine	01	2011	3,000	5	600	1,800	1,200
Sewing machine	02	2011	2,000	4	500	1,500	500
Sewing machine	03	2012	3,000	5	600	1,200	1,800
Sewing machine	04	2013	1,200	3	400	400	800
Total			9,200		2,100	4,900	4,300



Learn more about Asset Registers in the *IYB RECORD KEEPING MANUAL*.

In their Asset Register, they have listed \$2,100 as the total depreciation cost per year of the four sewing machines. To determine the depreciation cost per month, they divide the yearly depreciation cost by 12 months.

$$\text{Monthly depreciation} = \frac{\$2,100}{12} = \$175$$

Look at *Reliable Tailors'* Detailed Costs Record on page 19. Under Overhead Expenses, they have listed the depreciation cost of \$175.

Gitau, Neo and Lisa are not involved in production. Their salaries are considered Overhead Expenses. In the Salary Register on page 21, the total Non-Production Labour Cost is listed as \$730. Look at *Reliable Tailors'* Detailed Cost Record. The \$730 in wages is also recorded in the "Overhead Expenses" column.



## ACTIVITY 8

How does your business keep a record of the costs? Is it difficult for you to get cost data?

.....

.....

.....

If you have categorized your costs clearly and keep proper records, you can easily get the data.

Gitau then explains how she uses the information from the Detailed Costs Record to fill in the Product Costing Form.

### 4. Calculating costs

#### 4.1 Step 1: Calculate the Direct Material Cost per item

##### PRODUCT COSTING FORM (for multiple product manufacturers and service operators)

Product: Dust coats

##### 1. DIRECT MATERIAL COST PER ITEM

Total Direct Material Cost per month (1)	\$3,040
Number of items produced per month (2)	100
Direct Material Cost per item (3) = (1)/(2)	\$30.40

##### COSTING FOR A MULTIPLE PRODUCT MANUFACTURER OR SERVICE OPERATOR

1. Calculate the Direct Material Cost per item
2. Calculate the Direct Labour Cost per item
3. Calculate the Indirect Manufacturing Expense per item
4. Calculate the Overhead Expense per item
5. Add up all costs to get the total cost

Here are some notes to help you complete part one of a Product Costing Form to calculate the Direct Material Cost per item:

- **Total Direct Material Cost per month**

Take the sum of the “Direct Material Costs” column for the goods or services provided during one month from your Detailed Costs Record.

Gitau took the total Direct Material Cost for making dust coats in September from the last cell of the column “Direct Material Costs” for dust coats (see the Detailed Costs Record on page 19). She wrote down the figure (\$3,040) on the Product Costing Form, item (1).

- **Number of items produced per month**

If you sell all the products produced within the month, review your sales figures to determine the number of items made during that month. If you produce and stock finished products, review your stock card to examine the difference between the stock on hand at the end of the month and the stock you had at the beginning of the month.

$$\begin{array}{ccccccc} \text{Number of items} & & \text{Number of items} & & \text{Number of items} & & \text{Number of items in} \\ \text{made during the} & = & \text{sold during the} & + & \text{in stock at the end} & - & \text{stock at the beginning} \\ \text{month} & & \text{month} & & \text{of the month} & & \text{of the month} \end{array}$$



Learn more about the Stock Card in the *IYB BUYING AND STOCK CONTROL MANUAL*.

*Reliable Tailors* does not stock finished garments, so Gitau reviewed her business records and found that in September, *Reliable Tailors* made 100 dust coats. Gitau wrote the number of dust coats made on the Product Costing Form, item (2).

- **Direct Material Cost per item**

$$\text{Direct Material Cost per item} = \frac{\text{Total Direct Material Cost per month}}{\text{Number of items produced per month}}$$

Gitau divided the total Direct Materials Cost in September by the number of dust coats they made that month. She calculated the Direct Material Cost per item and wrote the figures on the Product Costing Form, item (3). Her calculation was as follows:

$$\text{Direct Material Cost per item} = \frac{\$3,040}{100} = \$30.40$$

When you have calculated the Direct Material Cost per item, you have completed step 1 of your costing.

## 4.2 Step 2: Calculate the Direct Labour Cost per item

Here is part two of *Reliable Tailors' Product Costing Form* for dust coat.

COSTING FOR A MULTIPLE PRODUCT  
MANUFACTURER OR SERVICE OPERATOR

1. Calculate the Direct Material Cost per item
- ➔ 2. **Calculate the Direct Labour Cost per item**
3. Calculate the Indirect Manufacturing Expense per item
4. Calculate the Overhead Expense per item
5. Add up all costs to get the total cost

2. DIRECT LABOUR COST PER ITEM

Total Direct Labour Cost per month (4)	\$480
Direct Labour Cost per item (5) = (4)/(2)	\$4.80

You can take the total Direct Labour Cost per month for making dust coats from your Detailed Costs Record. When you know the total Direct Labour Cost for making a particular product in a month, you can calculate the Direct Labour Cost per item:

$$\text{Direct Labour Cost per item} = \frac{\text{Total Direct Labour Cost per month}}{\text{Number of items produced per month}}$$

Gitau took the total Direct Labour Cost for making dust coats in September from the last cell of the column "Direct Labour Costs" for dust coat on her Detailed Costs Record (see page 19) and then made the following calculation:

$$\text{Direct Labour Cost per item} = \frac{\$480}{100} = \$4.80$$

Now that you have calculated the Direct Labour Cost per item, you have completed step 2 of your costing.

### 4.3 Step 3: Calculate the Indirect Manufacturing Expense per item



This is how Gitau calculated the Indirect Manufacturing Expense per item:

- COSTING FOR A MULTIPLE PRODUCT MANUFACTURER OR SERVICE OPERATOR**
1. Calculate the Direct Material Cost per item
  2. Calculate the Direct Labour Cost per item
  - ➔ **3. Calculate the Indirect Manufacturing Expense per item**
  4. Calculate the Overhead Expense per item
  5. Add up all costs to get the total cost

#### 3. INDIRECT MANUFACTURING EXPENSE PER ITEM

Total Indirect Manufacturing Expense per month (6)	\$815
Total direct cost of the entire business per month (7)	\$5,720
Indirect Manufacturing Expense per direct cost (8) = (6)/(7)	0.142
Total direct cost per item (9) = (3) + (5)	\$35.20
Indirect Manufacturing Expense per item (10) = (8) x (9)	\$5.00

- **Total Indirect Manufacturing Expense per month**

You can find the total Indirect Manufacturing Expense per month for your business from your Detailed Costs Record.

From her Detailed Costs Record, page 19, Gitau found that the total of the Indirect Manufacturing Expenses for *Reliable Tailors* during September was \$815.

- **Total direct cost for the entire business each month**

$$\text{Total direct cost} = \text{Total Direct Material Cost} + \text{Total Direct Labour Cost}$$

The total direct cost for the entire business is made up of both the Direct Material Cost and the Direct Labour Cost. To calculate the total direct cost for the entire business in one month, add up **all the “direct cost” columns** from your Detailed Costs Record for that month.

*Reliable Tailors* makes dust coats and overalls. To calculate their total direct cost in September, Gitau added up **all the direct costs of making dust coats and overalls** (figures are taken from the Detailed Costs Record on page 19).

$$\text{Total direct cost in September} = \$3,040 + \$2,020 + \$480 + \$180 = \$5,720$$

- **Indirect Manufacturing Expense per direct cost**

The total Indirect Manufacturing Expense per month is for the entire business and it must be divided and shared by all the goods or services the business makes or sells. It is generally believed that the Indirect Manufacturing Expenses for an item is directly proportional to the direct cost to make that item. The higher the direct cost, the higher the Indirect Manufacturing Expense is for that item. Therefore, to calculate the Indirect Manufacturing Expense for one item, we first calculate the ratio of Indirect Manufacturing Expense to direct cost.

$$\text{Indirect Manufacturing Expense per direct cost} = \frac{\text{Total Indirect Manufacturing Expense per month}}{\text{Total direct cost of the entire business per month}}$$

*Reliable Tailors* must add a part of the \$815 to the cost of each dust coat and overall they made during September. To do so, Gitau first calculated the Indirect Manufacturing Expense per direct cost and wrote the result on the Product Costing Form, item (8). Her calculation was as follows:

$$\text{Indirect Manufacturing Expense per direct cost} = \frac{\$815}{\$5,720} = 0.142$$

- **Total direct cost per item**

We have completed part one and part two of the Product Costing Form. Now we can determine the total direct cost per item by using the results from parts one and two.

Gitau took the information from parts one and two of her Product Costing Form and calculated the total direct cost per dust coat to be \$35.20.

- **Indirect Manufacturing Expense per item**

When we know the ratio of Indirect Manufacturing Expense to direct cost, we can easily calculate the Indirect Manufacturing Expense per item:

$$\text{Indirect Manufacturing Expense per item} = \text{Total direct cost per item} \times \text{Indirect Manufacturing Expense per direct cost}$$

Gitau calculated her Indirect Manufacturing Expense for each dust coat and wrote the result on the Product Costing Form, item (10). Her calculation was as follows:

$$\text{Indirect Manufacturing Expense per dust coat} = \$35.20 \times 0.142 = \$5.00$$

Now that you have calculated the Indirect Manufacturing Expense per item, you have completed step 3 of your costing.

#### 4.4 Step 4: Calculate the Overhead Expense per item

Below is part four of the *Reliable Tailors'* Product Costing Form for a dust coat.

COSTING FOR A MULTIPLE PRODUCT  
MANUFACTURER OR SERVICE OPERATOR

1. Calculate the Direct Material Cost per item
2. Calculate the Direct Labour Cost per item
3. Calculate the Indirect Manufacturing Expense per item
- ➔ 4. **Calculate the Overhead Expense per item**
5. Add up all costs to get the total cost

4. OVERHEAD EXPENSE PER ITEM

Monthly Overhead Expenses (11)		\$977
Overhead Expense per direct cost (12) = (11)/(7)		0.171
Overhead Expense per item (13) = (12) x (9)		\$6.02

Like the Indirect Manufacturing Expense, Overhead Expenses are for the entire business and the cost must be shared by all the goods or services the business makes or sells. The ratio of the amount of the company's Overhead Expense assigned to an item and the direct cost to make that item should be directly proportional. Step 4 is similar to step 3. You can find your total monthly Overhead Expenses from your Detailed Costs Record.

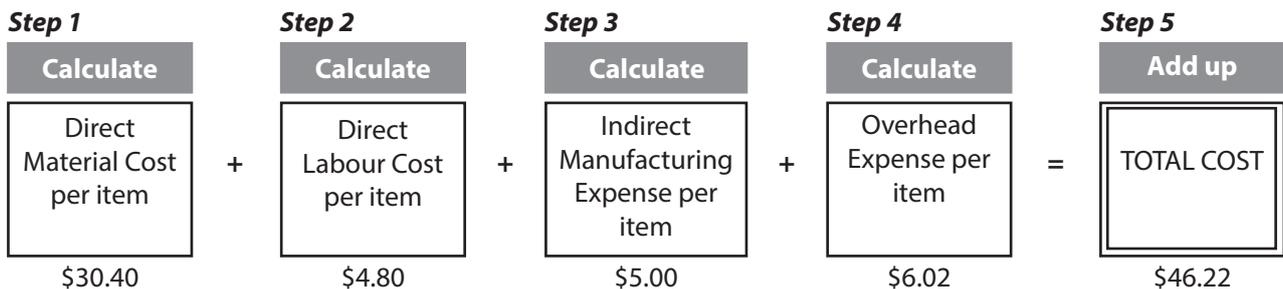
Now that you have calculated the Overhead Expense per item, you have completed step 4 of your costing.

#### 4.5 Step 5: Add up all costs to get the total cost

*Reliable Tailors* has completed steps one, two, three and four to cost a dust coat. They now have all the figures they need to calculate the total cost of a dust coat. To do step 5, they add up the amounts on the Product Costing Form:

COSTING FOR A MULTIPLE PRODUCT  
MANUFACTURER OR SERVICE OPERATOR

1. Calculate the Direct Material Cost per item
2. Calculate the Direct Labour Cost per item
3. Calculate the Indirect Manufacturing Expense per item
4. Calculate the Overhead Expense per item
- 5. **Add up all costs to get the total cost**



Now the owners of *Reliable Tailors* know the total cost of a dust coat. See the completed Product Costing Form on page 32. They follow the same five steps for costing their overalls. They use a separate Product Costing Form for each type of goods. If the costs are not the same, a separate Product Costing Form for each colour, quality or design is used.



“

The total cost of a good or service is not the price you charge your customers. The total cost is only a starting point to decide what price to charge. Learn how to set your prices in the IYB MARKETING MANUAL.



”

## PRODUCT COSTING FORM

(for multiple product manufacturers and service operators)

Product:

### 1. DIRECT MATERIAL COST PER ITEM

Total Direct Material Cost per month(1)	\$3,040	
Number of items produced per month (2)	100	
Direct Material Cost per item (3) = (1)/(2)		\$30.40

### 2. DIRECT LABOUR COST PER ITEM

Total Direct Labour Cost per month (4)	\$480	
Direct Labour Cost per item (5) = (4)/(2)		\$4.80

### 3. INDIRECT MANUFACTURING EXPENSE PER ITEM

Total Indirect Manufacturing Expense per month (6)	\$815	
Total direct cost of the entire business per month (7)	\$5,720	
Indirect Manufacturing Expense per direct cost (8) = (6)/(7)	0.142	
Total direct cost per item (9) = (3) + (5)	\$35.20	
Indirect Manufacturing Expense per item (10) = (8) x (9)		\$5.00

### 4. OVERHEAD EXPENSE PER ITEM

Monthly Overhead Expense (11)	\$977	
Overhead Expense per direct cost (12) = (11)/(7)	0.171	
Overhead Expense per item (13) = (12) x (9)		\$6.02

### 5. TOTAL COST PER ITEM (14) = (13) + (10) + (5) + (3)

\$46.22



Multiple product manufacturers or service operators have to allocate their costs to each particular product. To do so they divide their **Production Costs** into three groups: Direct Material Costs, Direct Labour Costs and Indirect Manufacturing Expenses.

**Direct Material Costs** are all the money your business spends on the parts and materials that meet all the following three criteria:

- The costs are directly related to the goods or services you make or sell.
- The costs are easy to trace to a particular good or service.
- The costs are substantial enough to add a considerable amount to the total cost.

**Direct Labour Costs** are all the money your business spends on wages, salaries and benefits for the employees or owners whose work meets all the following criteria:

- The time spent on making a particular good or service must be easy to calculate.
- The cost must be substantial enough to add a considerable amount to the total cost.

**Indirect Manufacturing Expenses** are all the money your business spends on the materials or labour that are related to the manufacture of goods or the provision of services, but cannot be considered Direct Labour Costs or Direct Material Costs.

Indirect Labour Costs are all the money your business spends on wages, salaries and benefits for the employees or owners who are involved in production process but the time they spend on making a particular good or service is difficult to calculate. Indirect Labour Cost is part of Indirect Manufacturing Expense.

Multiple product manufacturers and service operators use a **Product Costing Form** and follow five steps to calculate the total cost of making and selling their good or service:

- Step 1: Calculate the Direct Material Cost per item
- Step 2: Calculate the Direct Labour Cost per item
- Step 3: Calculate the Indirect Manufacturing Expense per item
- Step 4: Calculate the Overhead Expense per item
- Step 5: Add up all costs to get the total cost

Use a separate Product Costing Form for costing each type of goods or services.

The calculation of the total cost of a good or a service is the first thing you need to do before deciding what price to charge your customers.



## ASSESSMENT 2

You have just completed Part II of this manual. Try the exercise below to check your understanding. Finish the exercise before comparing your answers with those on page 73.

### Which one is correct?

Circle the correct or best ending for each sentence.

1. *Danda Cycle Shop* repairs bicycles. In his costing, Danda includes the cost of bicycle parts as...
  - a. an Overhead Expense.
  - b. an Indirect Manufacturing Expense.
  - c. a Direct Material Cost.
2. Juma, the owner of *Tasty Bread*, spends a third of her time supervising the employees who are baking the bread. The work Juma does is not directly related to any specific type of bread, so she includes a third of her own salary as...
  - a. an Indirect Manufacturing Expense.
  - b. a Direct Labour Cost.
  - c. an Overhead Expense.
3. For a multiple product manufacturer or service operator, in order to cost each of the goods or services, it is important to...
  - a. Trace all the costs to each particular good or service.
  - b. Trace direct costs to each particular good or service.
  - c. Trace Indirect Manufacturing Expenses and Overhead Expenses to each particular good or service.
4. The amount of the Indirect Manufacturing Expense and the Overhead Expense that a good or service must share is directly proportional to...
  - a. the Direct Material Cost to make it.
  - b. the time it takes the business to make it.
  - c. the total direct cost to make it.
5. To calculate the Indirect Manufacturing Expense per item, one should...
  - a. divide the total of the Indirect Manufacturing Expense per month by the number of products or services made per month.
  - b. divide the total of the Indirect Manufacturing Expense per month by the total direct cost of the entire business per month.
  - c. calculate the Indirect Manufacturing Expense per direct cost, then multiply the result by the total direct cost of each item.

# COSTING FOR A SINGLE PRODUCT MANUFACTURER OR SERVICE OPERATOR



If you are a multiple product manufacturer or service operator, turn to page 13. If you are a retailer or wholesaler, turn to page 47.

Mutebi owns a business called *Comfort Chairs*. His company makes and sells only one type of chair. He is not making much profit, so Mutebi thinks there is a problem with his costing. He asks his friends, Gitau and Mario at *Reliable Tailors*, for advice:

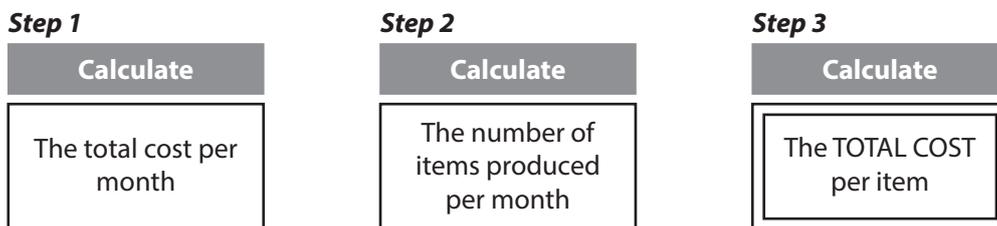


*Comfort Chairs* is a single product manufacturer. All the costs that go into making its good include:

$$\boxed{\text{Material Costs}} + \boxed{\text{Labour Costs}} + \boxed{\text{Overhead Expenses}} = \boxed{\text{TOTAL COST}}$$



To calculate all the costs for making a chair, *Comfort Chairs* use a Product Costing Form for single product manufacturers or service operators. The Product Costing Form follows the three steps:



## 1. Product Costing Form

The next page shows a Product Costing Form for single product manufacturers and service operators. Gitau and Mario show Mutebi how to do the calculation for each step. They explain how to fill in a Product Costing Form for a chair.

**PRODUCT COSTING FORM**  
(for single product manufacturers and service operators)

Product:

1. TOTAL COST PER MONTH

Total Material Cost per month (1)	
Total Labour Cost per month (2)	
Total Overhead Expense per month (3)	
Total cost per month (4) = (1) + (2) + (3)	

2. NUMBER OF ITEMS PRODUCED PER MONTH

Number of items produced per month (5)	
--	--

3. TOTAL COST PER ITEM (6) = (4)/(5)

--

## 2. Get cost data

To fill in the Product Costing Form, Mutebi needs the information from his Basic Record Book. The Basic Record Book for *Comfort Chairs* in October is on the page 39.



See the *IYB RECORD KEEPING MANUAL* to learn more about the *Basic Record Book*.

## 2.1 Material Costs

The materials that *Comfort Chairs* uses are wood, glue, sand paper, nails and varnish. Look at *Comfort Chairs'* Basic Record Book. The "Material Costs" column contains the cost for the materials purchased in October. The total Material Costs in October were \$958.

## 2.2 Labour Costs

There are seven people working at *Comfort Chairs*, including Mutebi. Six of them are involved in making chairs. Their monthly salaries of \$1,900 are Labour Costs.

## 2.3 Overhead Expenses

In addition to materials and labour, *Comfort Chairs* has other costs, including rent, electricity, transportation, equipment and the salaries of those who are not involved in making chairs.

Mutebi does not work in production. He is in charge of sales and general management. His monthly salary of \$500 is an Overhead Expense.

*Comfort Chairs* has three saws and one computer which last for a long time. They keep an Asset Register to manage the cost of this equipment. Below is their Asset Register which lists the depreciation cost for these items at \$1,440 per year, so their monthly depreciation cost is \$120 (\$1,440 divided by 12 months).



ASSET REGISTER							
Date: 31 December 2013							
Name of asset (1)	Serial number (2)	Year bought (3)	Cost of purchase (\$) (4)	Years to be used (5)	Depreciation per year (\$) (6)	Accumulated depreciation (\$) (7)	Remaining value (\$) (8)
Circular saw	101	2010	2,000	5	400	1,600	400
Circular saw	102	2010	2,450	5	490	1,960	490
Computer	201	2012	450	3	150	300	150
Circular saw	104	2013	1,600	4	400	400	1,200
Total			6,500		1,440	4,260	2,240

**Comfort  
Chairs**

**BASIC RECORD BOOK**

October 20xx

(Unit: US\$)

Date	Details	Voucher No.	Cash			Bank			Sales	Material Costs	Labour Costs	Overhead Expenses
			IN	OUT	BALANCE	IN	OUT	BALANCE				
1/10	Brought forward				1,200			2,000				
1/10	Wood	112		720	480				720			
1/10	Glue, Sand paper	113		10	470				10			
5/10	Nails	114		48	422				48			
5/10	Varnish	115		180	242				180			
5/10	Rent	116				300	1,700				300	
10/10	Sales	117				800	2,500	800				
15/10	Bank to cash box	118	1,000		1,242	1,000	1,500					
15/10	Salaries	119		1,200	42					950	250	
20/10	Sales	120	2,000		2,042			2,000				
25/10	Electricity	121		250	1,792						250	
30/10	Transportation	122		250	1,542						250	
30/10	Salaries	123		1,200	342					950	250	
30/10	Sales	124				2,000	3,500	2,000				
30/10	Depreciation											120
	<b>Total</b>		<b>3,000</b>	<b>3,858</b>		<b>2,800</b>	<b>1,300</b>	<b>4,800</b>	<b>958</b>	<b>1,900</b>		<b>1,420</b>

## 3. Calculating costs

### 3.1 Step 1: Calculate the total cost per month

Mutebi filled out the “total cost per month” section of his Product Costing Form as follows:

COSTING FOR A SINGLE PRODUCT BUSINESS	
<b>1. STEP 1: Calculate the total cost per month</b>	
2. STEP 2: Calculate the number of items produced	
3. STEP 3: Calculate the total cost per item	

PRODUCT COSTING FORM (for single product manufacturers and service operators)	
Product: Chair	
1. TOTAL COST PER MONTH	
Total Material Cost per month (1)	\$958
Total Labour Cost per month (2)	\$1,900
Total Overhead Expense per month (3)	\$1,420
Total cost per month (4) = (1) + (2) + (3)	\$4,278

Here are some notes to help you complete part one of a Product Costing Form to calculate the total cost per month.

- **Total Material Cost per month:** Take the sum of the “Material Costs” column in one month from your Basic Record Book. Write the figure in the space for item (1) in the Product Costing Form.  
Gitau showed Mutebi his business’ total Material Costs in October from the last cell of the column titled “Material Costs” and instructed him to write the figure (\$958) on the Product Costing Form, item (1).
- **Total Labour Cost per month:** Take the sum of the “Labour Costs” column in one month from your Basic Record Book. Write the figure in the space for item (2) in the Product Costing Form.  
Similarly, Mutebi took the total Labour Costs for October from his Basic Record Book (\$1,900) and filled in the space for item (2).
- **Total Overhead Expense per month:** Take the sum of the “Overhead Expenses” column in one month from your Basic Record Book. Write the figure in the space for item (3) in the Product Costing Form.  
Mutebi took his business’ total Overhead Expenses in October and wrote the figure (\$1,420) on the Product Costing Form, item (3).

- **Total cost per month:** The total cost is made up of Material Costs, Labour Costs and Overhead Expenses. To calculate the total cost for one month, add up all the costs for that month.  
Mutebi added up the figures in items (1) to (3) and wrote the result in the space for item (4).

### 3.2 Step 2: Calculate the number of items produced per month

If you sell all the goods produced within the month, review your sales figures to determine the number of items made during that month. If you produce and stock finished goods, review your stock card to examine the difference between the stock on hand at the end of the month and the stock you had at the beginning of the month.

COSTING FOR A SINGLE PRODUCT BUSINESS

1. STEP 1: Calculate the total cost per month
- 2. **STEP 2: Calculate the number of items produced**
3. STEP 3: Calculate the total cost per item

$$\begin{array}{ccccccc} \text{Number of items} & & \text{Number of items} & & \text{Number of items} & & \text{Number of items in} \\ \text{made during the} & = & \text{sold during the} & + & \text{in stock at the end} & - & \text{stock at the beginning} \\ \text{month} & & \text{month} & & \text{of the month} & & \text{of the month} \end{array}$$



Learn more about the Stock Card in the *IYB BUYING AND STOCK CONTROL MANUAL*.

In October, *Comfort Chairs* sold all the chairs they made for \$40 each. Mutebi determined the number of chairs his business made in October by dividing the total sales in October (\$4,800) by the price of each chair (\$40):

$$\text{Number of chairs made} = \frac{\$4,800}{\$40} = 120$$

Mutebi wrote the number of chairs produced in October in the space for item (5) in the Product Costing Form.

### 3.3 Step 3: Calculate the total cost per item

Mutebi has completed steps one and two of costing a chair. He now has all the information he needs to calculate the total cost of a chair.

To calculate the total cost of a product, divide your total cost per month by the number of items produced per month.

Mutebi divided his total cost in October (item 4) by the number of chairs his business made in that month (item 5).

#### COSTING FOR A SINGLE PRODUCT BUSINESS

1. STEP 1: Calculate the total cost per month
2. STEP 2: Calculate the number of items produced
- 3. **STEP 3: Calculate the total cost per item**

$$\text{Total cost per item} = \frac{\$4,278}{120} = \$35.65$$



Mutebi now knows the total cost of making one chair. See *Comfort Chairs'* complete Product Costing Form on page 43. Since *Comfort Chairs* makes only a single type of chair, the total cost applies to every chair that it makes. If any cost changes, such as Materials Costs or Labour Costs, Mutebi must recalculate his total cost.



**PRODUCT COSTING FORM**  
(for single product manufacturers and service operators)

Product: Chair

1. TOTAL COST PER MONTH

Total Material Cost per month (1)	\$958
Total Labour Cost per month (2)	\$1,900
Total Overhead Expense per month (3)	\$1,420
Total cost per month (4) = (1) + (2) + (3)	\$4,278

2. NUMBER OF ITEMS PRODUCED PER MONTH

Number of items produced per month (5)	120
--	-----

3. TOTAL COST PER ITEM (6) = (4)/(5)

\$35.65



The total cost of a good or service is not the price you charge your customers. The total cost is only a starting point to decide what price to charge. Learn how to set your prices in the IYB MARKETING MANUAL.



## SUMMARY

Single product manufacturers or service operators use a Product Costing Form and follow three steps to calculate the total cost of making and selling their good or service:

Step 1: Calculate the total cost per month

- Get the total monthly Material Cost from your Basic Record Book
- Get the total monthly Labour Cost from your Basic Record Book
- Get the total monthly Overhead Expense from your Basic Record Book
- Write the figures on the Product Costing Form, items (1), (2), (3)
- Add up all the items (1), (2) and (3) and write the calculation result on the Product Costing Form, item(4)

Step 2: Calculate the number of items produced per month

- Get the information from your Basic Record Book and Stock Cards to calculate the number of items your business produced per month
- Write the figure on the Product Costing Form, item (5)

Step 3: Calculate the total cost per item

- Divide the total cost per month by the number of items produced per month
- Write the calculation result on the Product Costing Form, item (6)

Calculating the total cost of a good or a service is the first thing you need to do before deciding what price to charge your customers.



You have just completed Part III of this manual. Try the exercise below to check your understanding. Finish the exercise before comparing your answers with those on page 73.

### Which one is correct?

Circle the correct answer or best ending for each sentence.

1. For a single product manufacturer or service operator, in order to calculate the total cost per month, it is important to...
  - a. keep records of all the money that goes out of the business in a month.
  - b. keep records of all the costs of the business in a month, regardless of whether money goes out of the business in that particular month or not.
  - c. keep records of all the money that comes into and goes out of the business in a month.
  
2. A single product manufacturer or service operator can calculate the cost of the good or service by...
  - a. dividing all the money that goes out of the business per month by the number of goods or services the company made per month.
  - b. dividing the total Material Cost and Labour Cost per month by the number of goods or services the company made per month.
  - c. dividing the total cost per month, including depreciation, by the number of items made per month.
  
3. Which of the following costing steps is NOT required by a single product manufacturer or service operator?
  - a. Calculate the Overhead Expense per item
  - b. Calculate the number of items produced per month
  - c. Calculate the total cost per month



# COSTING FOR A RETAIL OR WHOLESALE BUSINESS



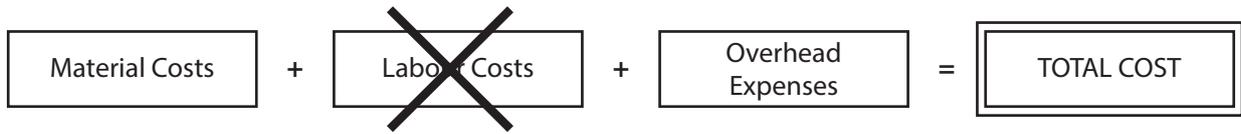
*If you are a multiple product manufacturer or service operator, turn to page 13.*

*If you are a single product manufacturer or service operator, turn to page 35.*

Sales at *Simba Bookshop* are booming, but profits are always low. Zuri is worried, so she goes to see Sibanda, the owner of *Sibanda General Store*.



Retailers and wholesalers have the same types of costs and can normally do their costing the same way. Costs are different for retailers and wholesalers than for manufacturers and service operators:

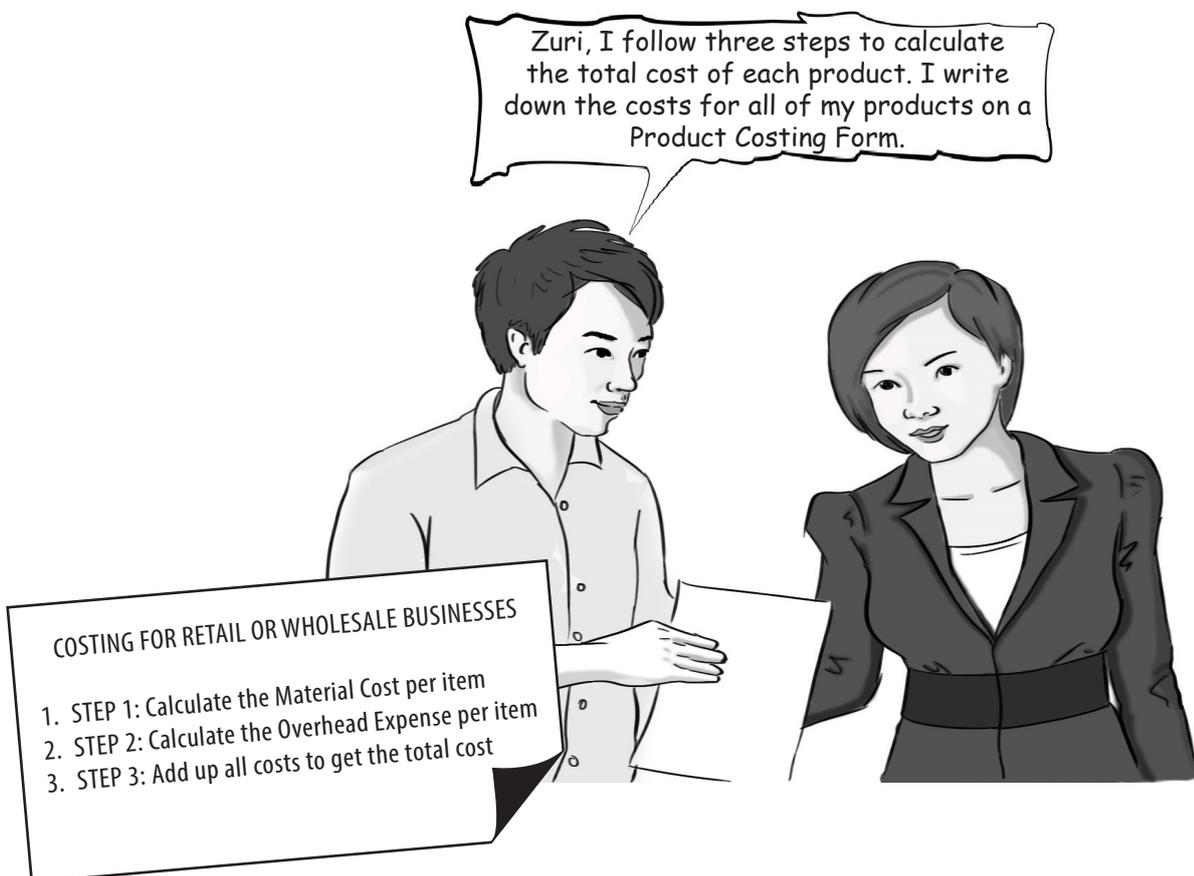


Retailers and wholesalers need to calculate Material Cost and Overhead Expense. Retailers do not make goods but they need goods to sell. The cost of buying goods to resell is a Material Cost for retailers and wholesalers. They buy and sell goods made by other businesses, but they do not have any employees making goods. So, for a retailer or wholesaler, all wages and salaries they pay to their employees are Overhead Expenses. They also have other Overhead Expenses, such as rent and electricity.

“

For a retailer or a wholesaler, all costs are either Material Costs or Overhead Expenses.

”



Sibanda shows Zuri how to do the calculations for each step. He explains everything a retailer needs to know about costing by showing Zuri how he fills in a Product Costing Form for his business.

Sibanda uses suppliers' invoices and his Basic Record Book to help with his calculations. He explains how to use information from suppliers' invoices when he describes step 1 and how to use information from the Basic Record Book when he describes step 2.

This is a Product Costing Form for retailers and wholesalers:

<b>PRODUCT COSTING FORM</b> (for retailers and wholesalers)			
<ul style="list-style-type: none"> <li>• <b>Overhead Charge (%)</b></li> </ul>			
$\frac{\text{MONTHLY OVERHEAD EXPENSE}}{\text{MONTHLY MATERIAL COST}} = \text{—————} \times 100\% = \boxed{\phantom{0000}} \%$ <p style="text-align: right; margin-right: 100px;">OVERHEAD CHARGE</p>			
	1	2	3
Product	Material Cost per item	Overhead Expense per item (column 1 x Overhead Charge)	Total cost per item

**Step 1**

**Calculate**

**Material Cost per item**

**Step 2**

**Calculate**

**Overhead Expense per item**

**Step 3**

**Calculate**

**TOTAL COST**

## 1. Step 1: Calculate the Material Cost per item

Material Costs for a retailer or wholesaler are the costs of buying goods to resell.

Sibanda explains to Zuri how to calculate the Material Cost per item for the different goods his store sells. He uses baked beans as an example:

COSTING FOR RETAIL OR WHOLESALE BUSINESSES

➔ **1. STEP 1: Calculate the Material Cost per item**

2. STEP 2: Calculate the Overhead Expense per item

3. STEP 3: Add up all costs to get the total cost



On the Product Costing Form, Sibanda wrote the name of the good. In column one, he wrote how much he pays for one item.

**PRODUCT COSTING FORM**  
(for retailers and wholesalers)

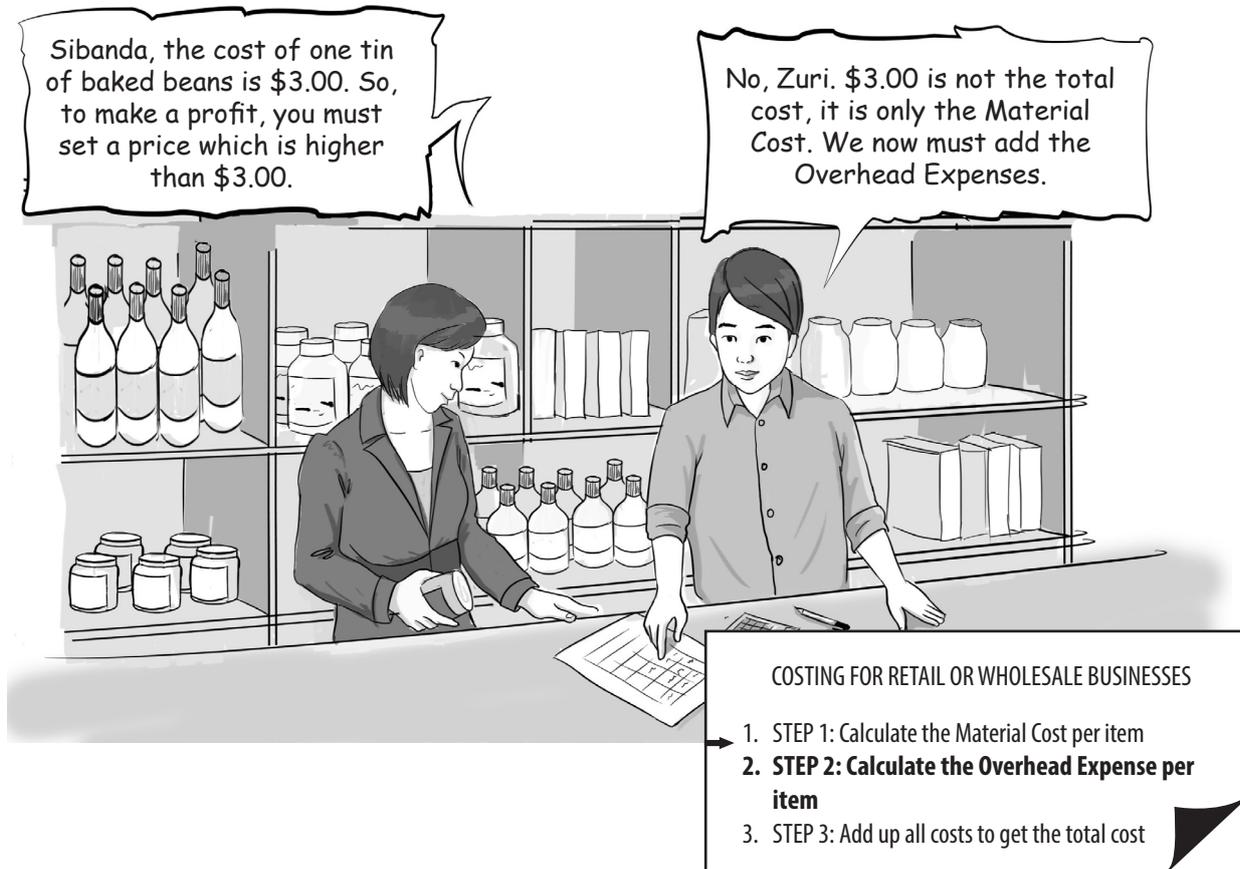
• **Overhead Charge (%)**

$$\frac{\text{MONTHLY OVERHEAD EXPENSE}}{\text{MONTHLY MATERIAL COST}} = \text{—————} \times 100\% = \boxed{\phantom{000}} \%$$

OVERHEAD CHARGE

	1	2	3
Product	Material Cost per item	Overhead Expense per item (column 1 x Overhead Charge)	Total cost per item
Groceries & dry foods:			
Farmer's baked beans, 450g	\$3.00		

## 2. Step 2: Calculate the Overhead Expense per item



For retailers or wholesalers, Overhead Expenses are all the costs of running the business that are not Material Costs, including wages and benefits for employees. In other words, expenses that are **not** part of the actual cost of the goods that are being purchased to resell must be recorded as Overhead Expenses. Read more about Overhead Expense on pages 6 - 9.

Sibanda reviewed his Basic Record Book and found that the total of the Overhead Expenses for *Sibanda General Store* averages around \$2,000 each month. The total Overhead Expense for a business must be divided and shared by each item the business sells. Sibanda must add a part of the \$2,000 to the cost of each item or good at his business.

**Overhead expenses  
\$2,000**



Look at my Basic Record Book. We have a lot of other expenses in our business. We pay for rent, wages, electricity and transport. These are our Overhead Expenses.

Yes, I have those expenses too.



How do you include Overhead Expenses in the total cost of one tin of beans?

I calculate the Overhead Charge for my business.



What is an Overhead Charge?

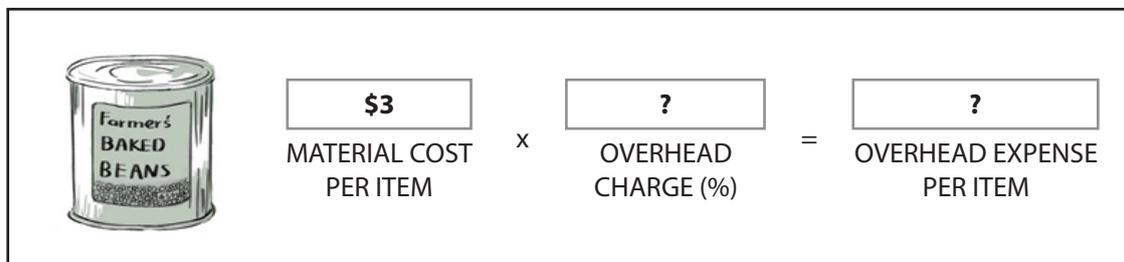
It is the percentage that you add to the cost of the items you sell in order to cover the total Overhead Expense.



Let me show you how I work out the Overhead Charge for my business.



Sibanda wants to calculate the Overhead Expense for one tin of baked beans. To do this, he must work out the Overhead Charges (percent) for his business. Then he can calculate how much to add to the Material Cost for each tin of baked beans to cover the total Overhead Expense.



Sibanda does the calculations for the Overhead Charge on the top part of his Product Costing Form.

To calculate the Overhead Charge and the Overhead Expense per item for every good you sell, follow these steps:

1. Calculate the total monthly Material Cost of all the goods you sell
2. Calculate the total monthly Overhead Expense
3. Calculate the Overhead Charge
4. Calculate the Overhead Expense per item

**PRODUCT COSTING FORM**  
(for retailers and wholesalers)

• **Overhead Charge (%)**

$$\frac{\text{MONTHLY OVERHEAD EXPENSE (2)}}{\text{MONTHLY MATERIAL COST (1)}} = \frac{\quad}{\quad} \times 100\% = \boxed{\quad} \%$$

OVERHEAD CHARGE (3)

	1	2	3
Product	Material Cost per item	Overhead Expense per item (4) (column 1 x Overhead Charge)	Total cost per item

**2.1 Calculate the monthly Material Cost**

First, calculate how much money your business spends each month to buy goods to resell.

Sibanda has many regular suppliers. He buys:

- Items like bread many times a week
- Items like dried foods, sugar, salt and margarine once a week
- Items like clothing once a month

All of these transactions are recorded in his Basic Record Book as Material Costs. Page 56 shows an extract from the *Sibanda General Store's* Basic Record Book for October.



October 20xx

**BASIC RECORD BOOK**

(Unit: US\$)

*Sibanda  
General  
Store*

Date	Details	Voucher No.	Cash			Bank			Sales	Material Costs	Overhead Expenses							
			IN	OUT	BALANCE	IN	OUT	BALANCE										
1/10	Brought forward				1,500					8,000								
1/10	Bread	312		100														100
1/10	Sugar, salt, pepper, cooking oil	313		400														400
1/10	Tea, coffee, milk, candy	314		600														600
1/10	Sales	315							450									
2/10	Baked beans and dry foods	316																1,000
2/10	Sales	317																320

30/10	Wage – shop assistant	389		100														100
30/10	Wage - owner	399		500														500
30/10	Sales	400	520															520
30/10	Electricity	401		100														100
30/10	Transportation	402		180														180
30/10	Bread	403		80														80
30/10	Bank to cash box	404	700															
30/10	Depreciation																	30
	<b>Total</b>		<b>15,760</b>	<b>15,700</b>		<b>8,600</b>	<b>7,300</b>		<b>11,980</b>	<b>10,000</b>								<b>2,000</b>

Sibanda took the total Material Cost for October from his Basic Record Book (\$10,000) and wrote the amount at the top of his Product Costing Form.

**PRODUCT COSTING FORM**  
(for retailers and wholesalers)

- Overhead Charge (%)**

$$\frac{\text{MONTHLY OVERHEAD EXPENSE (2)}}{\text{MONTHLY MATERIAL COST (1)}} = \frac{\quad}{\$10,000} \times 100\% = \boxed{\quad} \%$$

OVERHEAD CHARGE (3)

## 2.2 Calculate the monthly Overhead Expense

Remember, for a retailer or wholesaler, Overhead Expenses are all costs except the Material Cost. You can get the total monthly Overhead Expense of your business from your Basic Record Book. Remember to include depreciation with your Overhead Expenses, even though the cash may not be going out of your business during that month.

*Sibanda General Store* has two delivery motorbikes and expensive shelving, both of which last for a long time. They keep an Asset Register to manage the cost of this equipment. Below is their Asset Register, which lists the depreciation cost for these items at \$360 per year, so their monthly depreciation cost is \$30 (\$360 divided by 12 months).



ASSET REGISTER							
Date: 31 December 2013							
Name of asset (1)	Serial number (2)	Year bought (3)	Cost of purchase (\$) (4)	Years to be used (5)	Depreciation per year (\$) (6)	Accumulated depreciation (\$) (7)	Remaining value (\$) (8)
Shelving	001	2012	800	10	80	160	640
Delivery motorbike	002	2013	700	5	140	140	560
Delivery motorbike	003	2013	700	5	140	140	560
Total			2,200		360	440	1,760

Sibanda has recorded all the money that went out of his business in his Basic Record Book. Except for the money used to buy goods to resell, all the money that went out was recorded as an Overhead Expense. In the Basic Record Book on page 56 we see that the cost of electricity, transportation and salaries are all listed as Overhead Expenses. Depreciation is also included as an Overhead Expense.

Sibanda noted that the total Overhead Expense for his business listed in the *Sibanda General Store's* Basic Record Book for October was \$2000. He wrote this amount at the top of his Product Costing Form.

**PRODUCT COSTING FORM**  
 (for retailers and wholesalers)

- **Overhead Charge (%)**

$$\frac{\text{MONTHLY OVERHEAD EXPENSE (2)}}{\text{MONTHLY MATERIAL COST (1)}} = \frac{\$2,000}{\$10,000} \times 100\% = \boxed{\phantom{000}} \%$$

OVERHEAD CHARGE (3)

### 2.3 Calculate the Overhead Charge



To calculate the Overhead Charge, divide the monthly Overhead Expense by the monthly Material Cost and multiply by 100 percent.

Here was Sibanda's calculation:

**PRODUCT COSTING FORM**  
(for retailers and wholesalers)

- Overhead Charge (%)**



$$\frac{\text{MONTHLY OVERHEAD EXPENSE (2)}}{\text{MONTHLY MATERIAL COST (1)}} = \frac{\$2,000}{\$10,000} \times 100\% = \boxed{20\%}$$

OVERHEAD CHARGE (3)

Sibanda calculated that the Overhead Charge for his business is 20 percent. The 20 percent Overhead Charge means that Sibanda must add 20 percent to the Material Cost of each tin of baked beans:



**\$3**

MATERIAL COST  
PER ITEM

×

**20%**

OVERHEAD  
CHARGE (%)

=

**?**

OVERHEAD EXPENSE  
PER ITEM

When there are changes in the total Material Cost or in the total Overhead Expense, do your calculations again to find out if the Overhead Charge needs to be changed.

## ACTIVITY 9

All retailers and wholesalers have different Material Costs and different Overhead Expenses, so the Overhead Charge will be different for every business. Work out the Overhead Charge for your business in the same way that Sibanda does.

.....

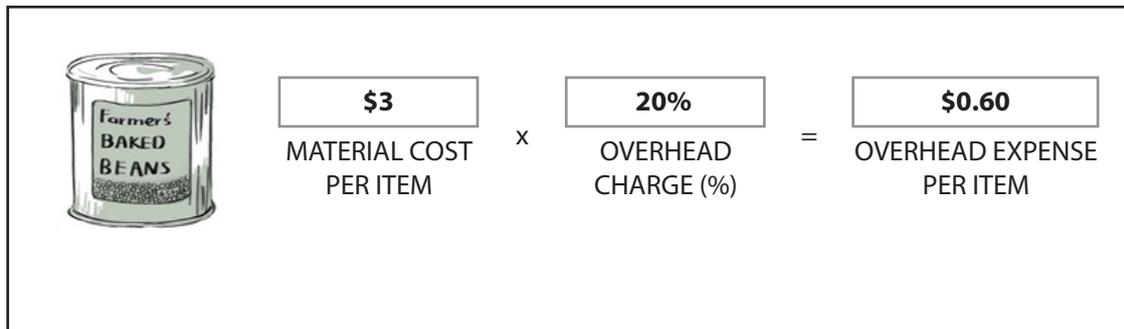
.....

.....

## 2.4 Calculate the Overhead Expense per item

The Overhead Charge tells you what percentage to add to the Material Cost of all the goods you sell so that you can cover your total Overhead Expense. Now you have to calculate the amount to add to each item.

The Overhead Charge for *Sibanda General Store* is 20 percent. So Sibanda must add 20 percent to the Material Cost of all the goods he sells. Here is how he calculates the amount to add to each tin of baked beans:



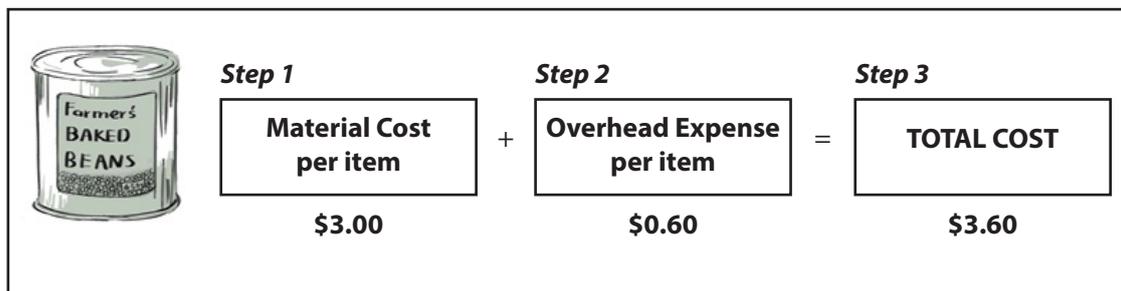
The Overhead Expense for a tin of baked beans is \$0.60. Now Sibanda knows that he must add \$0.60 to each tin of baked beans to cover his total Overhead Expense.

Sibanda uses column two of the Product Costing Form to calculate the amount to be added to each good. He uses the same Overhead Charge percentage to calculate the cost and to set the sales price for all the goods his business sells.

<b>PRODUCT COSTING FORM</b> (for retailers and wholesalers)			
<ul style="list-style-type: none"> <li>• <b>Overhead Charge (%)</b></li> </ul>			
$\frac{\text{MONTHLY OVERHEAD EXPENSE}}{\text{MONTHLY MATERIAL COST}} = \frac{\$2,000}{\$10,000} \times 100\% = \boxed{20\%}$ <p style="text-align: right; margin-right: 50px;">OVERHEAD CHARGE</p>			
	1	2	3
Product	Material Cost per item	Overhead Expense per item (column 1 x Overhead Charge)	Total cost per item
Groceries and dry foods:			
Farmer's baked beans, 450g	\$3.00	\$3.00 x 20% = \$0.60	
Pride flour, 1 kg	\$3.20	\$3.20 x 20% = \$0.64	

### 3. Step 3: Add up all costs to get the total cost

Sibanda now has all the information he needs to calculate the total cost of a tin of baked beans.



Sibanda shows Zuri how he calculates the total cost for baked beans and for all his other goods on the Product Costing Form:

**PRODUCT COSTING FORM**  
(for retailers and wholesalers)

• **Overhead Charge (%)**

$$\frac{\text{MONTHLY OVERHEAD EXPENSE}}{\text{MONTHLY MATERIAL COST}} = \frac{\$2000}{\$10000} \times 100\% = \boxed{20\%}$$

OVERHEAD CHARGE

	1	2	3
Product	Material Cost per item	Overhead Expense per item (column 1 x Overhead Charge)	Total cost per item
Groceries and dry foods:			
Farmer's baked beans, 450 g	\$3.00	\$3.00 x 20% = \$0.60	\$3.60
Pride flour, 1 kg	\$3.20	\$3.20 x 20% = \$0.64	\$3.84
Best Foods cooking oil, 750 ml	\$4.55	\$4.55 x 20% = \$0.91	\$5.46
Star sugar, 2 kg	\$4.71	\$4.71 x 20% = \$0.94	\$5.65
Eastern blend tea, 250 g	\$1.40	\$1.40 x 20% = \$0.28	\$1.68





“

The total cost of the goods is the amount you use to decide what price to charge your customers. To make a profit, your price must be higher than the total cost of the good. Learn how to set your prices in the IYB MARKETING MANUAL.

”



## SUMMARY

If you are a retailer or wholesaler, use a **Product Costing Form** and follow these three steps to calculate the total cost of each good you sell:

- Step 1: Calculate the Material Cost per item
- Step 2: Calculate the Overhead Expense per item
- Step 3: Add up all costs to get the total cost

Retailers and wholesalers include the wages and salaries paid to their employees and the owners as Overhead Expenses.

**Step 1:** Calculate the Material Cost per item

- Write down the name of each good your business sells
- Calculate and record the cost of each item, excluding any transportation cost

**Step 2:** Calculate the Overhead Expense per item

To calculate the Overhead Expense for an item, follow these steps:

- Calculate the total Material Cost per month: Add up the total Material Cost of all the goods your business buys to resell each month. Write the monthly Material Cost at the top of the Product Costing Form in the space provided.
- Calculate the total Overhead Expense per month: Get the information on all costs from your Basic Record Book, except the Material Costs. Remember to include depreciation. Write the monthly Overhead Expense at the top of the Product Costing Form in the space provided.
- Calculate the Overhead Charge (percent): Do your calculations on your Product Costing Form.
- Calculate the Overhead Expense per item: Multiply the Material Cost per item (column 1) by the Overhead Charge.

**Step 3:** Add up all costs to get the total cost

To get the total cost for an item, add up the Material Cost and the Overhead Expense for each item on the Product Costing Form.

$$\boxed{\begin{array}{c} \text{Material Cost per} \\ \text{item} \end{array}} + \boxed{\begin{array}{c} \text{Overhead} \\ \text{Expense per item} \end{array}} = \boxed{\text{TOTAL COST}}$$

Use the total cost of a good as the starting point to decide what price to charge your customers.



## ASSESSMENT 4

You have just completed Part IV of this manual. Try the exercise below to check your understanding. Finish the exercise before comparing your answers with those on page 73.

### Which one is correct?

Circle the best ending for each sentence.

1. For retailers or wholesalers, the Material Cost per item of a good is...
  - a. the cost of buying the good to resell.
  - b. the cost of all materials that become part of the good.
  - c. the cost of buying the good to resell and the transport costs.
  
2. Overhead Charge is...
  - a. the amount of Overhead Expense that a retailer or wholesaler adds to the sales to cover the total Overhead Expense.
  - b. a percentage that a retailer or wholesaler adds to the Material Cost per item to cover the total Overhead Expense.
  - c. the total monthly Overhead Expense, the amount of which is shared by all the goods a retailer or wholesaler sells.
  
3. To calculate the Overhead Expense per item, retailers or wholesalers...
  - a. divide the Material Cost per item by the Overhead Charge.
  - b. add the Overhead Charge to the Material Cost per item.
  - c. multiply the Material Cost per item by the Overhead Charge.
  
4. For retailers or wholesalers, monthly Overhead Expense is...
  - a. all the money that goes out of their businesses.
  - b. all the money that goes out of their businesses, except the cost of buying goods to resell.
  - c. all the other costs they have in their businesses, except the cost of buying goods to resell.
  
5. To calculate the total cost per item, retailers or wholesalers...
  - a. add up the Material Costs, the Labour Costs and the Overhead Expenses.
  - b. add up the total Material Cost and the Overhead Expenses.
  - c. add up the Material Cost per item and the Overhead Expense per item.

---

# WHAT DID YOU LEARN IN THIS MANUAL?

Now that you have studied this manual, try these practical exercises. These exercises will remind you of the things you have learned which will help you to improve the costing for your business.

The exercises will help you to:

- **Use** what you have learned to solve practical problems (Can You Help?).
- **Take action** to improve your business by using what you have learned (Action Plan).

Compare your answers with the answers at the end of the exercises on pages 73 - 75. If it is difficult for you to think of a correct answer, read the section of the manual again that relates to the exercise. The best way to learn is to finish each exercise and then look at the answers.

Check the list of Useful Business Words on page 77 to quickly find the meaning of a terminology.

“

You have learned about costing in this manual. But what you have learned does not help you until you use your new knowledge in your business. Remember to do the Action Plan on page 72.

”



## 1. Can You Help?

### Costing at *Beauty Spa*



*This exercise is for service operators and manufacturers. If you are a retailer or wholesaler, do the exercise on page 70.*

Phiri owns *Beauty Spa* at Simba business centre. Her spa provides three types of massage: facial massage, foot massage and body massage. Help Phiri to do a new costing for the facial massage.

Phiri keeps track of costs for each service. Next page has the Detailed Costs Record for *Beauty Spa* for last month.



## DETAILED COST RECORD

(Unit: US\$)



Date	Details	Voucher No.	Direct Material Costs			Direct Labour Costs			Indirect Manufacturing Expenses	Overhead Expenses
			Facial	Foot	Body	Facial	Foot	Body		
1/9	Masks	312	200		150					
1/9	Facial cream	312	120		90					
1/9	Supplies (cleaning gel, applicators, spatulas, swabs)	312						150		
1/9	Miscellaneous cleaning materials, soap, tea	312							30	
1/9	Massage oil - 20 bottles @ \$5 each	312		20	80					
1/9	Massage lotion - 10 boxes @ \$50 each	312		100	400					
15/9	Wages					1,000	500	3,000	1,000	800
15/9	Rent	330								1,500
20/9	Stationary	332								230
30/9	Water and electricity	336								100
30/9	Interest on loans	337								20
30/9	Depreciation									100
	<b>Total</b>		<b>320</b>	<b>120</b>	<b>720</b>	<b>1,000</b>	<b>500</b>	<b>3,000</b>	<b>1,150</b>	<b>2,780</b>

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Last month's sales data was taken from *Beauty Spa's* Basic Record Book as follows:

	Sales (\$)
Sales of facial massages - 200 @ \$10 each	2,000
Sales of body massages - 150 @ \$50 each	7,500
Sales of foot massages - 100 @ \$8 each	800

1. Use this information to calculate the total Direct Material Cost for the facial massage services provided in a one month period. Then fill in part one of the Product Costing Form on page 69 and calculate the Direct Material Cost for one facial massage.
2. Use this information to calculate the total Direct Labour Cost for the facial massage services provided in a one month period. Then fill in the information on part two of the Product Costing Form on page 69 and calculate the Direct Labour Cost for one facial massage.
3. Use the results from your calculations, together with the information above to fill in part three of the Product Costing Form on page 69 and to calculate the Indirect Manufacturing Expense for one facial massage.
4. Use the results from the calculations, together with the information above to fill in part four of the Product Costing Form on page 69 and to calculate the Overhead Expense for one facial massage.
5. Work out the total cost for one facial massage on the Product Costing Form. What do you think about the accuracy of the figure? Why?

## PRODUCT COSTING FORM

(for multiple product manufacturers and service operators)

Product:

### 1. DIRECT MATERIAL COST PER ITEM

Total Direct Material Cost per month (1)	
Number of items produced per month (2)	
Direct Material Cost per item (3) = (1)/(2)	

### 2. DIRECT LABOUR COST PER ITEM

Total Direct Labour Cost per month (4)	
Direct Labour Cost per item (5) = (4)/(2)	

### 3. INDIRECT MANUFACTURING EXPENSE PER ITEM

Total Indirect Manufacturing Expense per month (6)	
Total direct cost of the entire business per month (7)	
Indirect Manufacturing Expense per direct cost (8) = (6)/(7)	
Total direct cost per item (9) = (3) + (5)	
Indirect Manufacturing Expense per item (10) = (8) x (9)	

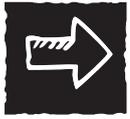
### 4. OVERHEAD EXPENSE PER ITEM

Monthly Overhead Expense (11)	
Overhead Expense per direct cost (12) = (11)/(7)	
Overhead Expense per item (13) = (12) x (9)	

### 5. TOTAL COST PER ITEM (14) = (13) + (10) + (5) + (3)

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## Costing at *Simba Bookshop*



*This exercise is for retailers and wholesalers. If you are a service operator or manufacturer, do the exercise on pages 66 - 69.*

*Simba Bookshop* is a retail business, mainly selling books and stationery. Sibanda at *Sibanda General Store* has shown Zuri, the owner of *Simba Bookshop*, how to do costing using a Product Costing Form. Help her to calculate the Overhead Expense per item and the total cost per item for each good she has listed on her Product Costing Form below. For your calculations, you also need to use this information:

- The average monthly amount used to purchase goods for resale at *Simba Bookshop* totals \$6,000.
- Rent, electricity, wages and all other Overhead Expenses at *Simba Bookshop* average \$1,500 per month.

PRODUCT COSTING FORM (for retailers and wholesalers)			
<p>• <b>Overhead Charge (%)</b></p> $\frac{\text{MONTHLY OVERHEAD EXPENSE}}{\text{MONTHLY MATERIAL COST}} = \text{—————} \times 100\% = \boxed{\text{\%}} \text{ OVERHEAD CHARGE}$			
	1	2	3
Product	Material Cost per item	Overhead Expense per item (column 1 x Overhead Charge)	Total cost per item
Pencils, HB	\$0.52		
Ballpoint pens, blue	\$1.00		
Markers, assorted colours	\$6.00		
Exercise books, large	\$1.60		
Envelopes, large brown	\$0.60		
Envelopes, small brown	\$1.40		
Tape	\$4.52		

## 2. Action Plan



<b>WHAT</b> is the problem?	<b>HOW</b> do you solve the problem?	<b>WHO</b> will solve the problem?	<b>WHEN</b> will the problem be solved?
I am not making much profit. I don't know exactly how much it costs me to make a chair.	I will use the information in my Basic Record Book to calculate the total cost of a chair.	I will.	I have all information I need. I will start my costing tomorrow.

How can your business get better at costing? Start by making an Action Plan like Mutebi did. In your plan, write down:

1. What problems does your business have in terms of costing?
2. How will you solve each problem?
3. Who will solve each problem (you or someone else)?
4. When do you plan to solve each problem?

Write down your Action Plan on the next page. Remember these suggestions:

- Make a plan for a three or six month period
- Be realistic. Only write down what you think is possible to do
- Try to solve the most urgent problem first
- Keep this manual at your business so that you and others in your business can use it when you need it
- Check regularly to make sure that you are following your Action Plan. It is a good idea to check every week
- Consider putting your Action Plan on the wall so it is easy to see and check

## Plan to improve your costing

Use this page to write down your own plan to improve the costing at your business.

<b>WHAT</b> is the problem?	<b>HOW</b> do you solve the problem?	<b>WHO</b> will solve the problem?	<b>WHEN</b> will the problem be solved?

**Assessment 1**

- (1) Material Costs; (2) Labour Costs; (3) Depreciation; (4) Total cost; (5) Overhead Expenses
- 1.c; 2.a; 3.a

**Assessment 2**

1.c; 2.a; 3.b; 4.c; 5.c

**Assessment 3**

1.b; 2.c; 3.a

**Assessment 4**

1.a; 2.b; 3.c; 4.c; 5.c

**Can You Help?****Costing at Beauty Spa**

The completed Product Costing Form for a facial massage is on page 74. Below is a detailed explanation for each question.

- Direct Materials that *Beauty Spa* uses for facial massage include a mask and facial cream. The total cost for these materials during the month were \$320:  $\$200 + \$120 = \$320$ .  
The number of facial massages they performed was 200.  
See the Direct Material Cost per facial massage on part one of the completed Product Costing Form.
- Total Direct Labour Cost for providing facial massages was \$1,000.  
See the Direct Labour Cost per facial massage on part two of the completed Product Costing Form.
- Total direct costs for *Beauty Spa* during the month = the total Direct Material Cost for all three services + the total Direct Labour Cost for all three services =  $(\$320 + \$120 + \$720) + (\$1000 + \$500 + \$3000) = \$5,660$ .  
See the Indirect Manufacturing Expense per facial massage on part three of the completed Product Costing Form.
- See the Overhead Expense for a facial massage on part four of the completed Product Costing Form for a facial massage.
- See the total cost for a facial massage on part five of the completed Product Costing Form.

The actual cost for a facial massage may be a little bit higher because there are some Indirect Manufacturing Expenses (e.g., towels) and Overhead Expenses (e.g. advertising and promotion) that were not incurred during the month. They are costs that *Beauty Spa* does not pay every month.

The Direct Labour Costs for a facial massage may be different in different months. While the number of spa therapists is unchanged, Labour Costs for a facial massage will decrease or increase depending upon the sales during that period.

To increase the accuracy of the cost calculation, *Beauty Spa* should use the **average** monthly data instead of the data from a specific month.

**PRODUCT COSTING FORM**

(for multiple product manufacturers and service operators)

Product: Facial massage

**1. DIRECT MATERIAL COST PER ITEM**

Total Direct Material Cost per month(1)	\$320
Number of items produced per month (2)	200
Direct Material Cost per item (3) = (1)/(2)	\$1.60

**2. DIRECT LABOUR COST PER ITEM**

Total Direct Labour Cost per month (4)	\$1,000
Direct Labour Cost per item (5) = (4)/(2)	\$5.00

**3. INDIRECT MANUFACTURING EXPENSE PER ITEM**

Total Indirect Manufacturing Expense per month (6)	\$1,150
Total direct cost of the entire business per month (7)	\$5,660
Indirect Manufacturing Expense per direct cost (8) = (6)/(7)	0.20
Total direct cost per item (9) = (3) + (5)	\$6.60
Indirect Manufacturing Expense per item (10) = (8) x (9)	\$1.32

**4. OVERHEAD EXPENSE PER ITEM**

Monthly Overhead Expense (11)	\$2,780
Overhead Expense per direct cost (12) = (11)/(7)	0.49
Overhead Expense per item (13) = (12) x (9)	\$3.24

**5. TOTAL COST PER ITEM (14) = (13) + (10) + (5) + (3)**

\$11.60
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## Costing at Simba Bookshop

The *Simba Bookshop* completed Product Costing Form should have the following amounts:

PRODUCT COSTING FORM for retailers and wholesalers			
<ul style="list-style-type: none"> <li><b>Overhead Charge (%)</b></li> </ul>			
$\frac{\text{MONTHLY OVERHEAD EXPENSE}}{\text{MONTHLY MATERIAL COST}} = \frac{\$1,500}{\$6,000} \times 100\% = \boxed{25\%}$ <p style="text-align: right;">OVERHEAD CHARGE</p>			
	1	2	3
Product	Material Cost per item	Overhead Expense per item (column 1 x Overhead Charge)	Total cost per item
Pencils, HB	\$0.52	\$0.52 x 25% = \$0.13	\$0.65
Ballpoint pens, blue	\$1.00	\$1.00 x 25% = \$0.25	\$1.25
Markers, assorted colours	\$6.00	\$6.00 x 25% = \$1.50	\$7.50
Exercise books, large	\$1.60	\$1.60 x 25% = \$0.40	\$2.00
Envelopes, large brown	\$0.60	\$0.60 x 25% = \$0.15	\$0.75
Envelopes, small brown	\$1.40	\$1.40 x 25% = \$0.35	\$1.75
Tape	\$4.52	\$4.52 x 25% = \$1.13	\$5.65

- To calculate the Overhead Charge, divide the total Overhead Expense per month by the total Material Cost per month and multiply by 100:

$$\frac{\$1,500}{\$6,000} \times 100\% = 25\%$$

- To calculate the Overhead Expense per item (column 2), multiply the Material Cost per item by the Overhead Charge:

$$\text{Pencils: } \$0.52 \times 25\% = \$0.13$$

- To work out the total cost per item (column 3), add the Material Cost per item and the Overhead Expense per item:

$$\text{Pencils: } \$0.52 + \$0.13 = \$0.65$$



# USEFUL BUSINESS WORDS

WORD	THE WORD MEANS	MORE ON PAGE
Costing	The way you calculate the total cost of making and selling a good or providing a service.	3, 13, 35, 47
Costs	All the money your business spends to make and sell your goods or services. Costs can be divided into Production Costs and Non-Production Costs.	2 - 9
Depreciation	The loss in value over a certain period of time for machinery, tools or other equipment which has a high value and lasts for a long time. Depreciation is a cost to your business.	8
Direct Labour Cost	All the Labour Costs that are traceable to a particular good or service and are substantial enough to add a considerable amount to the total cost. This type of cost is only applied to multiple product manufacturers or service operators.	14, 20
Direct Material Cost	All the Material Costs that are traceable to a particular good or service and are substantial enough to add a considerable amount to the total cost. This type of cost is only applied to multiple product manufacturers or service operators.	14, 18
Indirect Manufacturing Expenses	All the money your business spends on the materials or labour that are related to the manufacture of goods or services, but cannot be considered Direct Labour Costs or Direct Material Costs. This type of cost is only applied to multiple product manufacturers or service operators.	14-15, 22
Labour Cost	In costing, Labour Cost is all the money your business spends on wages, salaries and benefits for the employees who work in the production of your goods or services. Salaries and benefits of other employees (those not involved in production) are considered Overhead Expenses.	5, 38
Material Cost	All the money your business spends on the parts or materials that either become a part of, or are related to, the good or service you make and sell. For a retailer or wholesaler, a Material Cost is the cost of buying goods to resell.	3, 38, 49

WORD	THE WORD MEANS	MORE ON PAGE
Non-Production Cost	All other costs, except Production Costs, that you have for running your business. These costs are generally called Overhead Expenses.	3, 6 - 9
Overhead Expense	Overhead Expenses is another term for Non-Production Costs. It includes all costs that are not related to the production process. Costs of building, rent, electricity, interest on loans and salaries and benefits of people not involved in production are Overhead Expenses. Overhead Expenses are normally not directly related to one particular good or service that your business makes or sells.	3, 6-9, 22, 38, 51
Overhead Charge	A percentage (%) that retailers and wholesalers need to add to the Material Cost of each item to cover the total Overhead Expense. You use your Overhead Charge to calculate the Overhead Expense per item.	53 - 54, 58 - 59
Production Cost	All costs incurred in the production of your goods or provision of your services. Production Costs can be divided into Material Cost and Labour Cost.	3 - 6
Product Costing Form	A form which you can use to calculate the total cost of any good or service in your business. There are different Product Costing Forms for single product manufacturers and service operators, multiple product manufacturers and service operators and retailers and wholesalers.	17, 37, 49
Total cost	All the money that your business spends for Material Costs, Labour Costs and Overhead Expenses in order to make or sell a good or provide a service.	9, 15, - 16, 36, 49

# IMPROVE YOUR BUSINESS

## Costing

Started your business already, but have troubles in some aspects of business management?

**Improve Your Business (IYB)** is the existing entrepreneurs' guide to good principles of business management. **The IYB Costing** manual explains the different types of business costs and the steps to follow when calculating the cost of goods and services.

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IYB is part of the 'Start and Improve Your Business' family of management training courses for start-ups and small entrepreneurs. The programme builds on 25 years of experience working in 100 countries, partnering with 2500 local institutions, 200 certified Master Trainers and a network of over 17,000 Trainers. It has reached 6 million clients to date and these numbers are only increasing!

The IYB training is supported by a set of six manuals:

IYB Costing

IYB Marketing

IYB Record Keeping

IYB Buying and Stock Control

IYB Planning For Your Business

IYB People and Productivity

