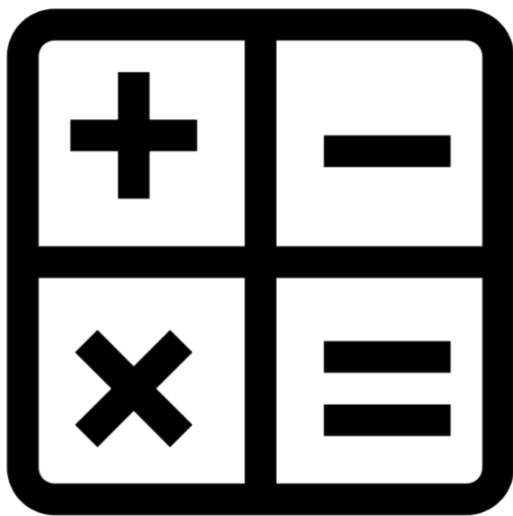




Department of
Education

Year 12 ATAR Accounting and Finance Unit 3: Cost Accounting



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Year 12 ATAR Accounting and Finance

Unit 3

Topic: Cost Accounting

OVERVIEW

The aim of providing resources for Year 12 Accounting and Finance students is to assist students to revise and prepare for Semester 1 Examinations. Additionally, these resources are designed to supplement (not replace) your classroom teacher's programme.

The following format applies to this booklet:

Section 1: Syllabus requirements

Please familiarise yourself with the syllabus requirements for each topic. Including links to the SCSA website for important curriculum documents. You will need to access the 2020 Specifications Booklet. Click this link to download a copy of the booklet: https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0012/593895/2020_ACF_Specification_Booklet.PDF

Section 2: Theory Content

Read through this section, taking notes and highlighting important concepts. Also included in this section are links to various videos to assist in your understanding of the topics.

Section 3: Activities

Various questions based on the topic content. Each question is followed by the suggested solution. This section includes ATAR Exam questions from previous years.

Section 1: Syllabus content covered

Financial Institutions and Systems: Financial Systems and Fundamental Principles

- The nature of cost concepts for materials, labour and overheads
- Classification of costs:
 - Behaviours: fixed, variable and mixed costs
 - Relationships to cost objects: direct and indirect costs
 - Treatment of costs: product and period
 - Time orientation of costs: past and future
- The concept of mark up and the calculation of the unit price of a product

Recording, using and evaluating financial information: Recording, processing and communicating financial information

- Cost accounting limited to calculation of the unit price of a product/service using only job order costing processes
 - Calculation of direct materials, direct labour and overhead costs
 - Calculation and application of predetermined overhead recovery rates only using normal capacity
 - Calculation of unit cost and the setting of selling/quotation prices for a job costing product / service
 - Use of standard costing and variance analysis for:
 - ✓ Materials price and usage
 - ✓ Labour rate and efficiency

You can find other important Accounting and Finance Course Information at:

<https://senior-secondary.scsa.wa.edu.au/syllabus-and-support-materials/humanities-and-social-sciences/accounting-and-finance>

The 2020 Accounting and Finance Specifications Booklet contains important formulas required for this topic:

https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0012/593895/2020_ACF_Specification_Booklet.PDF

Topic: Cost Accounting

Section 2: Reading and Note Taking Section

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- *Section 2: The following pages will outline the theory components of this topic.*
 - *Please take time to read through this information, taking notes and highlighting important concepts.*
 - *Then move on to Section 3: Activities Section for activities and exam style questions.*
-

Introduction

Cost accounting is an approach to calculate and evaluate the costs of operating a business and manufacturing goods.

Cost accounting is helpful in making a number of business decisions. An important aspect is setting prices for products.

Cost accounting can show the costs involved in producing a single product.

A business manager can then see what price needs to be set to recoup the production and operating costs associated with that product plus a profit margin.

Cost accounting can also be used to model changes to the business such as new equipment, new processes or new products.

Based on the results, a business manager will decide whether to go ahead with the change or not.

Cost Concepts

Business managers need information about the costs of products and whether they are profitable. The costs can be broken down to get more detailed information.

For example, a car manufacturer will know the quantity and cost of panels, screws and bolts in every car model. With this detailed information all costs can be managed, opportunities for cost savings can be identified and prices set for products. Business managers will then be able to plan and make informed decisions to benefit the company.

- **Materials**

Direct materials are the materials and parts directly used to manufacture a product, for example, wood for furniture, steel panels for cars. There are usually some materials such as fuel or oil for machinery that relate to manufacturing in general, not just specific products. These are called indirect materials and are included in overheads.

- **Labour**

Direct labour includes wages and other payroll costs of the employees that directly work to manufacture the product. When employees complete their timesheets they include a job or product number. When the payroll records are entered, this number assigns their hours to a particular job or product. An employee may work on a number of jobs in the course of a day and this way their labour costs can be divided amongst the relevant jobs. The costs associated with supervisors, managers and other staff who work in the factory or office are classified as indirect labour overhead.

- **Overheads**

Overheads are all the costs that are indirectly related to the manufacture of products, for example, rent, depreciation of equipment, power, cleaning, sales, marketing and management costs. Indirect labour costs and indirect materials costs are also overheads. By paying these costs the business is able to manufacture products but the costs relate to all manufacturing not just specific jobs or products.

Materials	Direct materials are the materials and parts directly used to manufacture a product, for example, wood for furniture, steel panels for cars. There are usually some materials such as fuel or oil for machinery that relate to manufacturing in general, not just specific products. These are called indirect materials and are included in overheads.
Labour	Direct labour includes wages and other payroll costs of the employees that directly work to manufacture the product. When employees complete their timesheets they include a job or product number. When the payroll records are entered, this number assigns their hours to a particular job or product. An employee may work on a number of jobs in the course of a day and this way their labour costs can be divided amongst the relevant jobs. The costs associated with supervisors, managers and other staff who work in the factory or office are classified as indirect labour overhead.
Overheads	Overheads are all the costs that are indirectly related to the manufacture of products, for example, rent, depreciation of equipment, power, cleaning, sales, marketing and management costs. Indirect labour costs and indirect materials costs are also overheads. By paying these costs the business is able to manufacture products but the costs relate to all manufacturing not just specific jobs or products.

Costs

- **Fixed costs**

Fixed costs do not change as business activity changes. They are constant amounts over the accounting period.

Examples of fixed costs are rent, depreciation, insurance, general and administration, selling costs and salaries. The cost per product is calculated by dividing the fixed cost by the number of products manufactured.

- **Variable costs**

Variable costs are determined by the level of business activity. If the level of business activity increases the variable cost will increase too.

Examples of variable costs include direct materials, direct labour and overheads such as fuel. A cost per product is calculated, so the more products manufactured, the higher the variable costs.

- **Mixed costs**

A mixed cost is a combination of fixed and variable.

Examples include the telephone cost. There is a fixed cost for line rental and a variable cost based on usage. Sales staff may be paid a fixed wage plus a variable commission based on sales.

Another example is if a business hires a vehicle. The rental payments are fixed and there is a variable cost for fuel and kilometres travelled.

- **Product costs**

Product costs directly relate to the products manufactured and are assigned to the related products. Once a product is completed it is recorded as an inventory current asset in the balance sheet. The value of the inventory is the sum of the product costs associated with its manufacture. Product costs for a manufacturer are the related direct materials, direct labour and overheads. Once products are sold they are transferred to the cost of the sales account and reported in the income statement in the period that the products are sold.

- **Period costs**

Period costs do not relate to specific jobs or the manufacture of products and are not included in the cost of inventory. They are general operating costs of the business, for example, the interest expense on a loan used to finance the business, selling and general administrative expenses. These costs are recognised as expenses in the period in which the costs were incurred, but there is a distinction to be made between costs.

For example, costs such as insurance, rent and maintenance of the head office are period costs but the insurance, rent and maintenance of the factory are overheads that are included as product costs.

The distinction between product costs and period costs is important for accurately measuring the cost of sales and profit for an accounting period and inventory in the balance sheet.

- **Past and future costs**

Past costs are also called sunk costs. They are costs that have been accounted for in the past and have no impact on current decisions. Future costs are also called relevant costs because they are relevant to current decisions and need to be considered when accounting for costs.

Watch a video on cost classifications <https://youtu.be/2EAAxZS3fYk>

Unit price and mark-up

An aim of business is to make profit. When selling products and services, business owners and managers must set a unit price that will at least cover the costs of manufacturing the product or service.

When the product is sold, the income earned will be used to pay for the costs of business; any money left over is profit.

A mark-up per cent is another method to set the unit price of a product. Unit price refers to the sale price for a single product. The mark-up is the amount that is added to the cost of a product to calculate the price charged to the customer.

For example, if it costs \$200 to manufacture a product and the selling price is \$260, the mark-up is \$60.

The mark-up amount is calculated by subtracting the cost from the unit price.

To find the mark-up percentage of a product divide the dollar amount of the mark-up by the unit cost:

$$\frac{\text{Mark up}}{\text{Unit cost}} = \frac{(260 - 200)}{200}$$

$$\frac{60}{200} \times 100 = 30\%$$

A mark-up is expressed as a percentage so mark-up amounts can be calculated by multiplying product costs by the percentage.

For example, a business has set their mark-up at 40%. This means that selling prices are as follows:

Product	Unit cost	Mark-up	Unit price
1	\$7.50	$7.50 \times 40\% = 3.00$	$7.50 + 3.00 = \$10.50$
2	\$32.00	$32.00 \times 40\% = 12.80$	\$44.80
3	\$14.00	$14.00 \times 40\% = 5.60$	\$19.60

The unit cost is calculated by dividing the total manufacturing cost for a job by the number of products or units manufactured in the job.

For example, if total costs equal \$1 650 and 220 units are produced, the unit cost is: $1650/220 = \$7.50$

Job order costing

Job order costing assigns direct and indirect costs to specific jobs. It is used in businesses where there are definable jobs that can be differentiated from each other.

An example is a custom furniture business.

Each job is different and each job requires different amounts of raw materials and labour.

Job order costing calculates the total cost for each custom job. Industries that sell items in batches will be able to use job order costing.

A business producing promotional items such as coffee mugs with logos could use job order costing. The mugs produced for each customer are separate jobs.

When a business uses job order costing, the typical steps are as follows:

1. An order from a customer is received.
2. A job order is issued to fill the customer's order.
3. Materials and labour costs are requisitioned and tracked for the job.
4. Overheads are allocated to the job using a predetermined overhead rate.
5. A job costing sheet is prepared, recording all direct and indirect costs of the job.
6. The job costing sheet is used to calculate the unit cost.
7. A mark-up is applied to the unit cost to set the unit price.

Direct Costs

When a customer order comes through to the manufacturing department, a job order number is assigned to the job. This job number appears on the materials requisition order that is used to take raw materials out of the inventory and assign them to the job.

The materials requisition order is the source document that the journal and ledger entries are based on. An entry is made to transfer the materials needed for a job from the inventory account to a work in process account. The details from the materials requisition order are also recorded on the job costing sheet as direct materials cost.

When employees fill in their timesheets, they classify their hours according to the job they worked on. This is done by including the relevant job number against the hours worked. Accounting software will use the job number to calculate total direct labour costs for each job. The number of labour hours will also be used to allocate overhead to each job.

If a customer requires a quote for the job, the manager or supervisor will need to estimate the number of labour hours needed to complete the job. This sets a standard cost for the job so employees know how long the job should take to complete. This estimate of direct labour costs is added to direct materials cost and an estimate of overhead so a total job cost can be calculated and quoted for the customer.

Predetermined overhead recovery rate

Actual total overheads are not known until the end of the accounting period. In the meantime, there are job orders that need to be costed.

The predetermined overhead recovery rate is based on budgeted overhead and production activity figures. It is predetermined because it is calculated before the start of the accounting period and applied to jobs over the period.

The formula to calculate the rate divides the estimated annual factory overhead cost by the estimated annual level of production activity. The production activity is usually the total direct labour hours. It results in a rate that is applied to allocate overheads to specific jobs. The formula is:

$$\frac{\text{Estimated annual factory overhead cost}}{\text{Estimated annual level of production activity}}$$

Assigning overheads to jobs using the rate is called overhead application or overhead recovery.

For example, a company estimates total overheads to be \$360 000 and direct labour hours to be 45 000 for the period. The predetermined overhead recovery rate is:

$$\frac{360\,000}{45\,000} = \$8.00$$

Over the period when jobs are costed the rate of \$8.00 is used to allocate overhead. For example, if a job was completed using 32 direct labour hours \$256 ($\8×32) is included in the job cost sheet.

Job cost sheet

A business will prepare a job cost sheet to calculate and summarise the costs of a job. It is used to record direct and indirect costs and to show the unit cost and unit price for the job. It is also used to prepare a quote for a customer with estimates of costs.

Direct Costs

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Job order costing

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Job cost sheet

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Use of standard costing and variance analysis

A standard cost is the projected cost of manufacturing a single product or a number of products during an accounting period under current and anticipated operating conditions. A standard is a bench mark for measuring performance. Standard costs are set in the budgets based on past experience and projected business activities.

Standards relate to the planned and expected cost of inputs used in manufacturing goods and producing services.

Actual costs are then compared with these standards. When there is a significant difference between the standard cost and the actual result it is known as a variance.

A variance is analysed by managers to find the cause and take action to rectify it. The aim is to focus attention on the areas of the business that are not performing as planned.

When actual results are lower than the standards it is a favourable result. If actual costs are greater than the standard costs then it is an unfavourable result.

Variance analysis highlights

Variations can arise because of waste and inefficiency. Mistakes are made in the production process which leads to the use of more resources.

The standard costs need to be based on reliable and accurate financial information so they are realistic targets for the business.

Read examples of variance analysis below.

Materials price	A variance occurs when the price paid for materials is different to the standard (budgeted) cost. Compare the actual units multiplied by the standard cost to the actual materials cost.
Materials usage	Refers to differences in the quantity of materials used between the standard usage and the actual usage. Compare the actual units multiplied by the standard quantity to actual quantity used.
Labour rate	The variance between what the actual number of hours worked was budgeted to cost and what it did cost. Compare the actual hours multiplied by the standard labour cost to the actual labour cost.
Labour efficiency	Based on the actual number of units produced this is the difference between the number of labour hours worked to produce the units compared to the number of hours it should have taken.
Fixed overhead spending	The difference between the actual fixed overhead spent and the standard of what was planned to be spent.
Fixed overhead capacity	This is the difference between the actual number of labour hours multiplied by the standard overhead application rate and the budgeted number of labour hours multiplied by the standard overhead application rate. Analysing whether production capacity was at the planned level.
Variable overhead spending	This is the difference between the actual variable overhead cost and what was budgeted (the standard).
Variable overhead efficiency	This compares the actual overhead based on direct labour hours to the variable overhead standard for that number of hours. It is the labour efficiency variance multiplied by the variable overhead standard rate.

To explain the types of variances the following accounting information will be used:

Standard costs of making one product	\$
Direct materials 6kg at \$10 per kg	60
Direct labour 5 hours at \$5 per hour	25
Variable overheads 5 hours at \$2 per hour	10
Fixed overheads 5 hours at \$6 per hour	30
Total cost	125

Budget targets		Actual results	
Production	1 400 units	Production	1 200 units
Sales	1 200 units	Sales	1 100 units
Unit Price	\$160	Direct material	7 400kg \$70 300
		Direct labour	6 200 hours
		Variable overheads	\$31 310
		Fixed overheads	\$11 500
			\$26 000
		Unit price	\$150

Direct materials variances

Materials price variance	1200 units standard cost (1200x\$60)	\$72 000
		\$70 300
	The actual cost was	\$ 1700
	Variance - favourable	
Materials usage variance	1200 units standard usage (1200x6kg)	7200kg
	Quantity actually used	7400kg
	Variance - unfavourable	200kg

Direct labour variances

Labour rate variance	6200 hours standard cost (6200x\$5)	\$31 000
	The actual cost was	\$31 310
	Variance - unfavourable	\$ 310
Labour efficiency variance	1200 units standard hours (1200x5hrs)	6000hours
	Actual number of hours	6200hours
	Variance - unfavourable	200hours

Fixed overhead variances

Fixed overhead spending	1200 units standard cost	\$36 000
	(1200x\$30)	\$26 000
	The actual cost was	\$10 000
	Variance - favourable	
Fixed overhead capacity	1400 units standard hours	7000hours
	(1400x5hrs)	6200hours
	Actual hours	800hours
	Variance - favourable	\$4800
	Dollar value of variance (800hrsx\$6)	

Variable overheads variances

Variable overhead spending	6200 hours standard cost (6200x\$2)	\$12 400
	The actual cost was	\$11 500
	Variance - favourable	\$ 900
Variable overhead efficiency	Direct labour efficiency variance	200hours
	Variable overhead amount	200hours x \$2
	Variance - unfavourable	\$400

Section 3: Activities Section

- *This section includes activities and exam style questions relevant to this topic.*
- *The solutions are included after each question.*
- *Attempt the question and then use the solution to assess your performance and revise.*

Unit price and mark-up

Question 1

Calculate the unit price for each product. The business adds a 45% mark-up to their products.

Product	Unit cost	Mark-up	Unit price
1	\$11.00	$11.00 \times 45\% = 4.95$	$11.00 + 4.95 = \$15.95$
2	\$8.50		
3	\$23.00		
4	\$18.00		
5	\$36.00		
6	\$120.00		

Question 1 Solution

Product	Unit cost	Mark-up	Unit price
1	\$11.00	$11.00 \times 45\% = 4.95$	$11.00 + 4.95 = \$15.95$
2	\$8.50	$8.50 \times 45\% = 3.83$	$8.50 + 3.83 = \$12.33$
3	\$23.00	$23.00 \times 45\% = 10.35$	$23.00 + 10.35 = \$33.35$
4	\$18.00	$18.00 \times 45\% = 8.10$	$18.00 + 8.10 = \$26.10$
5	\$36.00	$36.00 \times 45\% = 16.20$	$36.00 + 16.20 = \$52.20$
6	\$120.00	$120.00 \times 45\% = 54.00$	$120.00 + 54.00 = \$174.00$

Question 2

Calculate the unit cost for the following products.

Product	Total manufacturing	Units produced	Unit cost
1	120 000	100 000	$120\,000/100\,000 = \$1.20$
2	88 000	4 000	
3	2 900	200	
4	24 500	2 000	
5	45 000	9 000	
6	63 000	700	

Question 2 Solution

Product	Total manufacturing	Units produced	Unit cost
1	120 000	100 000	$120\,000/100\,000 = \$1.20$
2	88 000	4 000	$88\,000/4000 = \$22.00$
3	2 900	200	$2\,900/200 = \$14.50$
4	24 500	2 000	$24\,500/2000 = \$12.25$
5	45 000	9 000	$45\,000/9\,000 = \$5.00$
6	63 000	700	$63\,000/700 = \$90.00$

Question 3

For the products in question 3. (above) calculate the unit price at a mark-up of 50%.

Product	Unit cost	Mark-up	Unit price
1	\$1.20	$1.20 \times 50\% = 60c$	$1.20 + 0.60 = \$1.80$
2			
3			
4			
5			
6			

Question 3 Solution

Product	Unit cost	Mark-up	Unit price
1	\$1.20	$1.20 \times 50\% = 60c$	$1.20 + 0.60 = \$1.80$
2	\$22.00	$22.00 \times 50\% = 11.00$	$22.00 + 11.00 = \$33.00$
3	\$14.50	$14.50 \times 50\% = 7.25$	$14.50 + 7.25 = \$21.75$
4	\$12.25	$12.25 \times 50\% = 6.12$	$12.25 + 6.12 = \$18.37$
5	\$5.00	$5.00 \times 50\% = 2.50$	$5.00 + 2.50 = \$7.50$
6	\$90.00	$90.00 \times 50\% = 45.00$	$90.00 + 45.00 = \$135.00$

Variances

In the following questions use the accounting information given to calculate all variances.

Question 4

Standard costs of making one product		\$
Direct materials 5m at \$14 per metre		70
Direct labour 6 hours at \$5 per hour		30
Variable overheads 6 hours at \$3 per hour		18
Fixed overheads 6 hours at \$7 per hour		<u>42</u>
		160

Budget targets		Actual results	
Production	2000 units	Production	1800 units
Sales	1800 units	Sales	1700 units
Unit price	\$1000	Direct material	8800m \$132 000
		Direct labour	10 400 hours \$52 200
		Variable overheads	\$30 500
		Fixed overheads	\$74 000
		Unit price	\$150

Question 4 Solution

Direct Materials Variances

Materials price variance	1800 units standard cost (1800x\$70)	\$126 000
	The actual cost was	\$132 000
	Variance - Unfavourable	\$6,000
Materials usage variance	1800 units standard usage (1800x5m)	9 000kg
	Quantity Actually used	8 800kg
	Variance - favourable	200kg

Direct Labour Variances

Labour rate variance	10 400 hours standard cost (10400x\$5)	\$52 000
	The actual cost was	\$52,2000
	Variance - Unfavourable	\$200
Labour efficiency variance	1800 units standard hours (1800x6 hours)	10 800 hours
	Actual number of hours	10 400 hours
	Variance - favourable	400 hours

Fixed Overhead Variance

Fixed Overhead Spending	1800 units standard cost (1800x\$42)	\$75 600
	The actual cost was	\$74 000
	Variance - favourable	\$1 600
Fixed Overhead Capacity	2 000 units standard hours (2000x6hrs)	12 000 hrs
	Actual Hours	10 400 hrs
	Variance – favourable	1 600 hrs
	Dollar value of variance (1600hrsx\$7)	\$11 200

Variable Overhead Variance

Variable Overhead Spending	10 400 hours standard cost (10400x\$3)	\$31 200
	The actual cost was	\$30 500
	Variance - favourable	\$700
Variable Overhead Efficiency	Direct Labour Efficiency Variance	400 hours
	Variable overhead amount	400 x \$3
	Variance – favourable	\$1 200

Question 5 (37 marks)

Well-That's-Fabulous Ltd is a boutique business that manufactures three different quality desserts. The desserts are:

- Meyroonfive Sundaes
- Good Bunny Fluff
- Me-go's Sorbet.

The details for each department and the budgeted overheads and cost drivers for 2020 are detailed below.

	'Make it' department	'Mix it' department	'Pack it' department
Estimated overheads	\$205,000	\$7,700	\$30,000
Estimated allocation base	1,000 machine hours	500 machine hours	6,000 direct labour hours

Well-That's-Fabulous Ltd makes its products in batches. The details below relate to the production of one batch of Good Bunny Fluff produced in October 2020.

	Direct materials	Direct labour	Machine hours
'Make it' department		18 hours at \$58 per hour	11 hours
Powdered egg white	\$7,500		
Sugar	\$5,000		
Corn syrup	\$2,200		
Cream of tartar	\$65		
Vanilla extract	\$120		
'Mix it' department	Nil	21 hours at \$32 per hour	32 hours
'Pack it' department		52 hours at \$25 per hour	40 hours
Plastic tubs	\$1,500		
Labels	\$650		

The batch of Good Bunny Fluff made 10,000 × 180 ml tubs

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination
https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0005/592628/2019-ACF-Written-Examination.PDF

(a) Calculate the predetermined overhead rate for each department.

(i) 'Make it' department (2 marks)

Workings:

Predetermined overhead rate for 'Make it' department: _____

(ii) 'Mix it' department (2 marks)

Workings:

Predetermined overhead rate for 'Mix it' department: _____

(iii) 'Pack it' department (2 marks)

Workings:

Predetermined overhead rate for 'Pack it' department: _____

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination

https://senior-secondary.scsa.wa.edu.au/_data/assets/pdf_file/0005/592628/2019-ACF-Written-Examination.PDF

- (b) Calculate the total cost of the batch of Good Bunny Fluff. (20 marks)

Workings:

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination
https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0005/592628/2019-ACF-Written-Examination.PDF

- (c) Calculate the cost of one tub of Good Bunny Fluff. (2 marks)

Workings:

Cost of one tub of Good Bunny Fluff: _____

- (d) Well-That's-Fabulous Ltd has set its mark-up as 120% on cost for Good Bunny Fluff.
Calculate the selling price of one tub of Good Bunny Fluff. (3 marks)

Workings:

Selling price of one tub of Good Bunny Fluff: _____

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination
https://senior-secondary.scsa.wa.edu.au/_data/assets/pdf_file/0005/592628/2019-ACF-Written-Examination.PDF

- (e) A business may classify costs in different categories. Explain each of the cost classifications below. (6 marks)

Behaviours:

Relationships to cost objects:

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination
https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0005/592628/2019-ACF-Written-Examination.PDF

Question 5 Solution

(a) Calculate the predetermined overhead rate for each department.

(i) 'Make it' department (2 marks)

Description	Marks
Predetermined rate = <u>overheads</u> allocation base	
Rate = <u>205,000</u> (1)	1
1,000 (1)	1
= 205	
Total	2

Predetermined overhead rate for 'Make it' department: \$205 per machine hour

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

(ii) 'Mix it' department (2 marks)

Description	Marks
Predetermined rate = <u>overheads</u> allocation base	
Rate = <u>7,700</u> (1)	1
500 (1)	1
= 15.4	
Total	2

Predetermined overhead rate for 'Mix it' department: \$15.40 per machine hour

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

(iii) 'Pack it' department (2 marks)

Description	Marks
Predetermined rate = <u>overheads</u> allocation base	
Rate = <u>30,000</u> (1)	1
6,000 (1)	1
= 5	
Total	2

Predetermined overhead rate for 'Pack it' department: \$5.00 per direct labour hour

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination Marking Key
https://senior-secondary.scsa.wa.edu.au/_data/assets/pdf_file/0004/592627/2019-ACF-Ratified-Marking-Key.PDF

(b) Calculate the total cost of the batch of Good Bunny Fluff. (20 marks)

Description			Marks
Cost = DM + DL + OH			
DM – Make it =	7,500 (1) + 5,000 (1) + 2,200 (1) + 65 (1) + 120 (1)	14,885.00	1–5
DM – Mix it =	0	0	
DM – Pack it =	1,500 (1) + 650 (1)	2,150.00	1–2
	Total DM	17,035.00	
DL – Make it =	18 (1) x 58 (1)	1,044.00	1–2
DL – Mix it =	21 (1) x 32 (1)	672.00	1–2
DL – Pack it =	52 (1) x 25 (1)	1,300.00	1–2
	Total DL	3,016.00	
OH – Make it =	205 (1) x 11 (1)	2,255.00	1–2
OH – Mix it =	15.40 (1) x 32 (1)	492.80	1–2
OH – Pack it =	5 (1) x 52 (1)	260.00	1–2
	Total OH	3,007.80	
Total cost =	(17,035.00 + 3,016.00 + 3,007.80) (1)	23,058.80	1
Total			20

Total cost of the batch of Good Bunny Fluff: \$23,058.80

Deduct 1 mark for each calculation error, to a maximum of 3 marks. Deduct 1 mark for inclusion of foreign items, to a maximum of 3 marks.

(c) Calculate the total cost of one tub of Good Bunny Fluff. (2 marks)

Description		Marks
Cost/tub =	$\frac{\text{Total cost}}{\text{Total units}}$	
	$\frac{23,058.80 (1)}{10,000 (1)}$	1
Total cost of one tub =	\$2.31	1
Total		2

Cost of one tub of Good Bunny Fluff: \$2.31

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

- (d) Well-That's-Fabulous Ltd has set its mark-up as 120% on cost for Good Bunny Fluff. Calculate the selling price of one tub of Good Bunny Fluff. (3 marks)

Description	Marks	
Selling price = cost + (mark-up x cost)	2.31 (1) + (2.31 (1) x 120% (1)) = 2.31 + 2.77 = \$5.08	1–3
Total	3	

Selling price of one tub of Good Bunny Fluff: \$5.08

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

- (e) A business may classify costs in different categories. Explain each of the cost classifications below. (6 marks)

Description	Marks
For each of the cost classifications of behaviours and relationships to cost objects:	
Explains the cost classification	3
Describes the cost classification	2
Describes some of the cost classification	1
Total	6
Answer(s) could include but are not limited to:	
Behaviours:	
<ul style="list-style-type: none"> Variable costs vary with the level of production or other activity measure. As production increases, variable costs increase proportionally. Fixed costs remain the same across levels of production or other activity measure. As production increases, fixed costs do not change. Mixed costs have a component of variable and a component of fixed costs. As production increases, only the variable component will increase. 	
Relationships to cost objects:	
<ul style="list-style-type: none"> Direct costs are directly related/attributionable to a cost object. If the cost object is a unit of production then direct material, direct labour and direct overheads are directly traceable to the product. Indirect costs are costs incurred but not directly traceable to a cost object, such as manufacturing overheads for all products. 	
Accept any other reasonable answer.	

Source: School Curriculum and Standards Authority, Accounting and Finance 2019 ATAR Examination Marking Key
https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0004/592627/2019-ACF-Ratified-Marking-Key.PDF

Question 6

M-Sighrus Ltd manufactures a range of designer hand-beaded kaftans for the local market. It uses a job order costing system. Indirect manufacturing costs are allocated using a predetermined overhead rate based on the cost driver of direct labour hours.

At the beginning of 2020, the budgeted indirect manufacturing costs were forecast to be \$1,680,000. The estimated direct labour hours for 2020 were 120,000 hours.

The following information was extracted from M-Sighrus Ltd's accounting records for the month ended 31 October 2020:

- 2,500 kaftans were manufactured
- the standard costs for each kaftan were as follows:
 - direct materials: 3.7 square metres @ \$25.00 per square metre
 - direct labour: 2 hours per kaftan @ \$18.00 per direct labour hour
- direct materials purchased and used were 8,750 square metres at \$25.50 per square metre
- direct labour hours worked were 6,250 hours @ \$17.00 per hour.

(a) Calculate the predetermined overhead rate. (2 marks)

Workings:

Predetermined overhead rate: _____

Source: School Curriculum and Standards Authority, Accounting and Finance 2018 ATAR Examination

https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0008/542960/2018_ACF_Written_Examination_Web-version.PDF

Calculate the standard cost for **one** kaftan manufactured during the month ended 31 October 2020. (6 marks)

Workings:

Standard cost for **one** kaftan: _____

(c) Calculate the following standard cost variances for the month of October 2020.

(i) Direct materials price variance: (4 marks)

Workings:

Direct materials price variance: _____

Source: School Curriculum and Standards Authority, Accounting and Finance 2018 ATAR Examination

https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0008/542960/2018_ACF_Written_Examination_Web-version.PDF

(ii) Direct materials usage variance:

(5 marks)

Workings:

Direct materials usage variance: _____

(i) Direct labour rate variance:

(4 marks)

Workings:

Direct labour rate variance: _____

Source: School Curriculum and Standards Authority, Accounting and Finance 2018 ATAR Examination

https://senior-secondary.scsa.wa.edu.au/_data/assets/pdf_file/0008/542960/2018_ACF_Written_Examination_Web-version.PDF

(ii) Direct labour efficiency variance:

(5 marks)

Workings:

Direct labour efficiency variance: _____

Source: School Curriculum and Standards Authority, Accounting and Finance 2018 ATAR Examination

https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0008/542960/2018_ACF_Written_Examination_Web-version.PDF



Question 6 Solution

- (a) Calculate the predetermined overhead rate. (2 marks)

Workings	Marks
Overhead rate = $\frac{\text{total estimated manufacturing overhead}}{\text{budgeted direct labour hours}}$ = $\frac{1,680,000 \text{ (1)}}{120,000 \text{ (1)}}$ = 14	1–2
Total	2
Predetermined overhead rate: \$14 per hour	

Deduct 1 mark for each calculation error and/or inclusion of foreign items, to a maximum of 1 mark.

- (b) Calculate the standard cost for
- one**
- kaftan manufactured during the month ended 31 October 2020. (6 marks)

Workings	Marks
Cost = direct materials + direct labour + indirect manufacturing/overhead = $3.70 \text{ (1)} \times 25.00 \text{ (1)} = 92.50$ + $2.00 \text{ (1)} \times 18.00 \text{ (1)} = 36.00$ + $2.00 \text{ (1)} \times 14.00 \text{ (1)} = 28.00$ = $92.50 + 36.00 + 28.00 = 156.50$	1–6
Total	6
Standard cost for one kaftan: \$156.50	

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

- (c) Calculate the following standard cost variances for the month of October 2020.
- (i) Direct materials price variance: (4 marks)

Workings	Marks
(AP – SP) x AQP	
(25.50 (1) – 25.00 (1)) x 8,750 (1) = 4,375 (Unfavourable (1))	1–4
Total	4
Alternate workings	
Direct materials purchased and used at actual price: 8,750 (1) square metres at 25.50 (1) per square metre = 223,125	
Direct materials purchased and used at standard price: 8,750 square metres at 25.00 (1) per square metre = 218,750	1–4
223,125 – 218,750 = 4,375 (Unfavourable (1)) *1 mark awarded only once for 8,750 square meters	
Total	4
Direct materials price variance: \$4,375 Unfavourable	

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

- (ii) Direct materials usage variance: (5 marks)

Workings	Marks
(AQI – SQA) x SP	
[8,750 (1) – (3.7 (1) x 2,500 (1))] x 25.00 (1) = 12,500 (Favourable (1))	1–5
Total	5
Alternate workings	
Direct materials purchased and used at standard price: 8,750 square metres (1) at 25.00* per metre (1) = 218,750	
Standard direct material cost allowed for actual output: (3.7 metres (1) x 2,500 kaftans (1)) x 25.00* per metre = 231,250	1–5
218,750 – 231,250 = 12,500 (Favourable (1)) *1 mark awarded once only for 25.00 per metre	
Total	5
Direct materials usage variance: \$12,500 Favourable	

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

Source: School Curriculum and Standards Authority, Accounting and Finance 2018 ATAR Examination Marking Key
https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0008/542960/2018_ACF_Written_Examination_Web-version.PDF

(iii) Direct labour rate variance: (4 marks)

Workings	Marks
(AR – SR) x ADLH	
(17.00 (1) – 18.00 (1)) x 6,250 (1) = 6,250 (Favourable (1))	1–4
Total	4
Alternate workings	Marks
Actual DLH at actual rate per DLH: 6,250 (1) DLHs at 17.00 (1) per DLH = 106,250	
Actual DLH at actual rate per DLH: 6,250 DLHs at 18.00 (1) per DLH = 112,500	1–4
106,250 – 112,500 = 6,250 (Favourable (1))	
Total	4
Direct labour rate variance: \$6,250 (Favourable)	

Deduct 1 mark for each calculation error, to a maximum of 1 mark.

Source: School Curriculum and Standards Authority, Accounting and Finance 2018 ATAR Examination Marking Key
https://senior-secondary.scsa.wa.edu.au/data/assets/pdf_file/0008/542960/2018_ACF_Written_Examination_Web-version.PDF

END OF CURRENT TOPIC

Please access the other Resource Packages provided which cover other topics from Unit 3.