

**INANDA NEWTOWN COMPREHENSIVE HIGH SCHOOL
ACCOUNTING CLASS GRADE 12**

MANUFACTURING

COST CALCULATIONS – UNIT COSTS

1. Direct Material Cost per unit:

$\frac{\text{Direct Material cost}}{\text{No. Of units manufactured/produced}}$

2. Direct Labour Cost per unit:

$\frac{\text{Direct labour cost}}{\text{No. Of units produced}}$

3. Prime /Direct Cost :

Direct material costs + Direct Labour Costs

4. Prime / Direct cost per unit:

$\frac{\text{Prime Cost}}{\text{No. Of units produced}}$

5. Factory Overhead per unit:

$\frac{\text{Factory Overhead costs}}{\text{No. Of units produced}}$

6. Selling and Distribution Costs per unit

$\frac{\text{Selling and Distribution cost}}{\text{No. Of units sold}}$

7. Administration Cost per unit:

$\frac{\text{Administration costs}}{\text{No. Of units sold}}$

8. Total Fixed Costs:

Factory Overhead costs + Administration costs

9. Total Fixed Cost per unit :

Factory Overhead costs/u + Administration costs/u

10.Total Variable Costs:

Direct Material costs + Direct labour costs +selling and distribution costs

11. Total Variable Costs per unit :

Direct material costs/u + Direct Labour costs/u + Selling and Distribution costs/u

12. Total Costs of Production/ Total Manufacturing Costs:

Direct material costs+ Direct Labour costs + Factory Overhead costs

13. Unit Cost:

$\frac{\text{Total cost of Production}}{\text{No. Of units produced}}$

14. Selling Price per unit:

$\frac{\text{Sales}}{\text{No. Of units sold}}$

15. Contribution per unit

Selling price per unit – Variable costs per unit

16. Break-even point

Contribution per unit = selling price per unit – variable cost per unit

Break-even point = $\frac{\text{fixed costs}}{\text{Contribution per unit}}$

17. Break – even Sales

Selling price per unit x Break – even Pint

18. Units manufactured and sold to achieve target profit

$\frac{\text{Fixed costs + target Profit}}{\text{Selling price per unit – Variable costs per unit}}$

19. Gross Profit on Finished Goods

$\frac{\text{Gross Profit}}{\text{Sale of Finished Goods}}$

ACTIVITY 12**EXERCISE TO PRACTICE DIFFERENT
FORMULA – CALCULATION OF UNIT COST
10 MINUTES**

Write down different formula to calculate the following:

		FORMULA
1	Direct Material Cost per unit	
2	Direct Labour Cost per unit	
3	Prime /Direct Cost	
4	Prime / Direct Cost per unit	
5	Factory Overhead costs per unit	
6	Selling and Distribution costs per unit	
7	Administration Costs per unit	
8	Total Fixed Costs per unit	
9	Total Fixed Costs per unit	
10	Total Variable Costs	
11	Total Variable Costs per unit	
12	Total costs of Production	

13	Unit Cost	
14	Selling Price per unit	
15	Contribution per unit	
16	Break – even point in units	
17	Break – even Sales	
18	Units manufactured and sold to achieve target profit	
19	Gross Profit on finished goods	

You are provided with a Production Cost Statement of Ndara's Belt Factory

REQUIRED

You are required to calculate the following (assume that all factory overheads and administration costs are fixed costs, and other costs are variable)

1. Direct material cost per unit
2. Direct labour cost per unit
3. Total direct cost per unit (Prime costs)
4. Factory overhead cost per unit
5. Cost of production of finished goods per unit
6. Selling and distribution costs per unit.
7. Administration costs per unit
8. Variable cost per unit
9. Fixed cost per unit
10. Selling price per unit
11. Contribution per unit
12. Break-even point (i.e. the point at which no profit or loss is earned)

INFORMATION

Ndara's Belt Factory produced 1 000 belts during the year.

There was no Work-in-progress either at the beginning or at the end of the year. The belts are sold at R52.00 each. All belts produced were sold.

NDARA'S BELT FACTORY PRODUCTION COST STATEMENT FOR THE PERIOD ENDED 28 FEBRUARY 20.8

	Notes	Amount	Per Unit
Direct /Prime Cost		23 000	23
Direct material cost	1	8 000	8
Direct labour cost	2	15 000	15
Factory overheads	3	17 000	17
Total manufacturing costs		40 000	40
Work-in-progress at the beginning of the year		0	
		40 000	
Work-in-progress at the end of the year		0	
Cost of production of finished goods		40 000	40

Income Statement for the period 28 February 20.8

Sales		52 000	52
Cost of Finished Goods	4	(40 000)	40
Gross Profit		12 000	12
Selling and distribution	5	(5 500)	5.50
Administration cost	6	(8 500)	8.50
Net profit (loss)		(2 000)	2.00

ANSWER

	COST	FORMULA	CALCULATION	ANSWER
1	Direct material cost per unit			
2	Direct labour cost per unit			
3	Prime Cost per unit			
4	Factory Overheads per unit			
5	Cost of finished goods per unit			
6	Selling and distribution cost per unit			
7	Administration cost per unit			
8	Variable costs per unit			

	COST	FORMULA	CALCULATION	ANSWER
9	Fixed cost per unit			
10	Selling Price per unit			
	COST	FORMULA	CALCULATION	ANSWER
11	Contribution per unit			
12	Break-even point			

<p><u>Proof of Break-even point:</u></p> 	
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ACTIVITY 14**CALCULATIONS OF UNIT COST**

The following information was taken from the records of Midas Manufacturers, a sole proprietor involved in the manufacturing of plastic buckets.

INSTRUCTIONS:

Study the given information and calculate the following:

1. Cost of production per unit of finished goods
2. Selling price per unit
3. Mark-up percentage on cost
4. Direct material cost per unit
5. Direct labour cost per unit
6. Prime cost per unit
7. Manufacturing overhead costs per unit

INFORMATION:

**MIDAS MANUFACTURERS
PRODUCTION COST STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2007**

	Notes	R
Direct costs / Primary costs		420 000
Direct material costs	1	240 000
Direct labour costs	2	180 000
Factory overhead costs	3	120 000
Total manufacturing costs		540 000
Work-in-process at beginning of year		42 000
		582 000
Work-in-process at end of year		(150 000)
Cost of production of finished goods		432 000

1. DIRECT MATERIAL COSTS	
Opening inventory	96 000
Net purchases (48 000 + 168 000 – 6 000)	210 000
Carriage on purchases	6 000
Custom duties	0
	312 000
Closing inventory	(72 000)
	240 000

2. DIRECT LABOUR COSTS	
Factory wages	150 000
Pension fund contributions	11 250
Medical aid contributions	15 750
UIF contributions	3 000
	180 000

3. FACTORY OVERHEAD COSTS	
Indirect material / Consumable stores	6 000
Indirect labour	0
Depreciation: factory plant	18 000
Maintenance: factory plant	12 000
Electricity	26 400
Rent	57 600
	120 000

4. COST OF FINISHED GOODS SOLD	
Opening inventory of finished goods	30 000
Cost of finished goods produced during the year	432 000
Cost of finished goods returned by debtors	6 000
	468 000
Closing inventory of finished goods	(156 000)
Cost of finished goods sold	312 000

**MIDAS MANUFACTURERS
TRADING STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2007**

	Notes	R
Sales		780 000
Cost of sales		(312 000)
Gross profit		468 000

ADDITIONAL INFORMATION:

*Total number of plastic buckets produced: 34 560

*Total number of plastic buckets sold: 26 000

ANSWER

1. COST OF PRODUCTION PER UNIT OF FINISHED GOODS

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2. SELLING PRICE PER UNIT

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3. MARK-UP PERCENTAGE ON COST

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4. DIRECT MATERIAL COST PER UNIT

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5. DIRECT LABOUR COST PER UNIT

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6. PRIME COST PER UNIT

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7. MANUFACTURING OVERHEAD COSTS PER UNIT

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