

## Monyetla Bursary Project

### Grade 11

#### Lesson 2: Measurement Questions

#### QUESTION 1:

1.1	Volume of cylinder = $\pi \times r^2 \times h$ , $\pi = 3,142$ $= 3,142 \times 4^2 \times 12$ $= 603,26 \text{ cm}^3$	(3)
1.2	Circumference of a circle = $2 \times \pi \times r$ $= 2 \times 3,142 \times 4$ $= 25,14 \text{ cm}$	(2)
1.3	Length = 25,14 cm Breadth = $12 - 1 - 2$ $= 9 \text{ cm}$	(4)
1.4	The label is not in proportion to the page and needs to have a specific length and breadth. If you divide the area of the page by the area of one label, it implies that the label can have any dimensions. Correct method: Length of page $\div$ length of label = round down answer to whole number Breadth of page $\div$ breadth of label = round down answer to whole number Total number of labels = Answer of length $\times$ Answer of breadth	(4)
1.5	Length = $75 \div 25,14$ $= 2,9....$ $\approx 3$ Breadth = $65 \div 9$ $= 7,2....$ $\approx 7$ Total = $3 \times 7$ $= 21$	(5)

1.6	Length = $6 \times 8$ = 48 cm Breadth = $4 \times 8$ = 32 cm Height = 12 cm	(4)
1.7	Volume of box = $48 \times 32 \times 12$ = 18 432 cm <sup>3</sup> Volume of bottles = $603,26 \times 24$ = 14 478,24 cm <sup>3</sup> Percentage not used = $\frac{18\,432 - 14\,478,24}{18\,432} \times 100$ = 21,45%	(7)
		<b>[29]</b>

### QUESTION 2:

2.1	$20 \times 22 = 440$ km per tank $440 \div (5,7 + 5,7)$ = $440 \div 11,4$ = 38,596... = 38 trips	(5)
2.2	$11,4 \text{ km} \div 1,6$ = 7,125 miles	(2)
2.3	$07:30 - 10 - 17$ = 07:03	(3)
2.4	1 litre : 22 km $1 \div 22 : 1 \text{ km}$ 0,05 litres : 1 km	(2)
		<b>[12]</b>