

SMART EXAM RESOURCES
CAMBRIDGE LOWER SECONDARY
STAGE 7 TOPIC QUESTIONS
MATHS
UNITARY METHOD-SET-2

- 1 A plane flies between two cities 1836km apart.
It travels at an average speed of 850 km/h.

Calculate how long the flight takes.
Give your answer in hours.

..... hours [2]

Mark Scheme:

2.16 (hours)	2	Accept $2\frac{4}{25}$. Accept 2 hours 9.6 minutes if units are stated. Accept answers 2, 2.1 or 2.2 if 2.16 seen in working.
$1836 \div 850$	M1	M1 implied by fractions equivalent to $\frac{1836}{850}$. M1 implied by 2.16 spoilt or answer 2 hours 16 mins

- 2 Mike buys 8 cakes for \$11.60
Calculate the cost of 5 cakes.

\$ [2]

Mark Scheme:

(\$) 7.25	2	
$11.6 \div 8$ or 1.45 or $\frac{5}{8} \times 11.6$ oe	M1	oe, e.g. $58 \div 8$, $11.6 \div 1.6$

3

Hari buys 38.5 litres of petrol.

He pays \$54.67

Josie buys the same type of petrol and pays \$80.00

Calculate how many litres Josie buys.

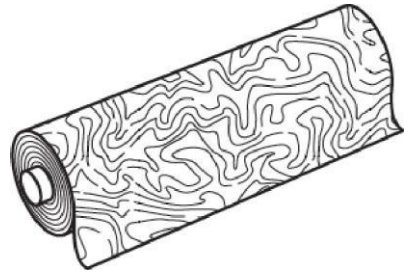
..... litres [2]

Mark Scheme:

Part	Mark	Answer	Further Information
	2	56.3(38...) or 56 (litres)	<p>For 2 marks accept 56.34 or 56.32</p> <p>Award 1 mark for an attempt to find the cost of one litre (\$1.42) and divide 80 by that.</p> <p>or</p> <p>Award 1 mark for an attempt to find the amount that can be bought for \$1 (0.704.. litres) and multiply that by 80</p> <p>or</p> <p>Award 1 mark for using proportions e.g. $(80 \div 54.67) \times 38.5$</p>
Total	2		

- 4 The cost of cloth is directly proportional to the length.
A 3.2-metre length of cloth costs \$38

Work out the cost of a 2.4-metre length of cloth.



\$

[2]

Mark Scheme:

(£)28.5(0)	2	
$\frac{38}{3.2}$ or $\frac{2.4}{3.2}$	M1	Implied by 11.875 or 0.75

5

- a) The table shows the times it takes Chen and Aiko to type some words.

	Number of words	Time taken	Typing speed (words per minute)
Chen	2020	40 minutes	
Aiko	7200	2 hours 30 minutes	

Complete the table.

[2]

- (b) Mia can type 45 words per minute.

Work out how long it will take her to type 1300 words.
Give your answer to the nearest minute.

minutes [2]

Mark Scheme:

(a)	Chen: 50.5 and Aiko: 48 correctly placed in table.	2	
	50.5 or 48	B1	
(b)	29 (minutes)	2	
	A correct method, e.g.: $1300 \div 45$	M1	Implied by answer of 28.8(.....) minutes or 28.9 minutes.

- 6 Pierre buys 56 litres of fuel for \$103.60
Carlos buys 40 litres of the same fuel.

Work out how much Carlos pays.

\$ _____ [2]

Mark Scheme:

(£)74	2	
$\frac{103.60}{56} \times 40$ or 1.85 or 0.71(...) or $\frac{5}{7}$	M1	