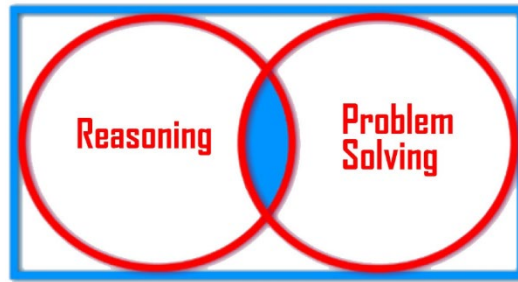


GCSE Foundation (5 – 1)





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Mathematical Reasoning Questions

(Proportions and Best Buy) – Set 1

**The marks shown are for guidance purposes only
[Total marks: 14 Marks]**

<p>1</p>	<p>Answer True or False to the following statements</p> <p>a) If $x:y = 5:6$, then $\frac{x}{y} = \frac{5}{6}$</p> <p>b) If $x:y = 1:2$, then x is 50% of y</p> <p>c) If $x:y = 1:2$, then y is 50% of x</p> <p style="text-align: right;">[3Marks]</p>
<p>2</p> 	<p>A 5 kg bag of potatoes cost £2.95 A 4.5 kg bag of the same potatoes cost £2.79 Ella say's 'since 5 kg is bigger than 4.5 kg, it must give better value for money' Is Ella right? Show how to decide</p> <p style="text-align: right;">[2Marks]</p>
<p>3</p> 	<p>A litre of petrol cost £1.15 The average consumption of a model of Nissan is 4.5 litres per 15km. How much petrol will it cost for a 150 km journey using this model of Nissan?</p> <p>a) £11.50 b) £77.63 c) £51.80 d) £45.00</p> <p style="text-align: right;">[1Mark]</p>
<p>4</p>	<p>Bennie cycles 900 m in 5 minutes Which calculation below will give the time it takes Bennie to cycle 400 m? Choose one answer</p> <p>a) $\frac{200}{9}$ b) $\frac{20}{9}$ c) $\frac{90}{200}$ d) $\frac{9}{20}$</p> <p style="text-align: right;">[1Mark]</p>

5 The scale on a map show 5 cm : 25000 m
Two towns are 15000 m apart in real life.
How far apart are they on the map?

- a) 25 cm
- b) 15 cm
- c) 6 cm
- d) 3 cm

[1Mark]

6 Zayn is 150 cm tall this year.
The ratio of his height last year to his new height is 31:40
Identify the calculation to find Zayn's height last year

- a) $\frac{31}{40} \times 50$
- b) $\frac{31}{4} \times 15$
- c) $\frac{40}{31} \times 150$
- d) $\frac{6000}{31}$

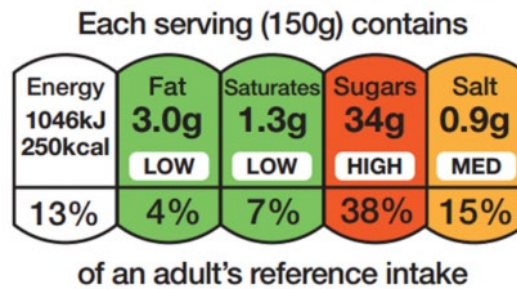
[1Mark]

7 Complete the table below

Fraction	Ratio	Percentage
$\frac{2}{5}$		40%
	7:4	
$\frac{13}{20}$		65%

[2Marks]

8 This is the label on a food packaging



What is the amount of sugar in 1800 g of this food?

Choose one answer

- a) 400
- b) 408
- c) 280.3
- d) 793.9

[1Mark]

9 From the food label in **Question 8 above**, what percentage of salt will be in 80 g of this food? Show all your workings



[1Mark]

10 X is directly proportional to Y

A table of some values for X and Y is shown below



X	A	25	30
Y	25	30	B

The value of A + B will be closest to

Choose one answer

- a) 57
- b) 60
- c) 55
- d) 50

[1Mark]