

**Mathematics Assessment: RATIO AND PROPORTION / ALGEBRA**

Name..... Class..... Date.....

- 1** To make **4** fruit drinks, Jana needs **400 ml** of orange and **600 ml** of lemonade.

How much orange and lemonade would she need to make **6** fruit drinks?



Use this box for your working out.

ml of orange  
and  
ml of lemonade



2 marks

- 2** Solve the following.

- a** **25%** of **160** children have brown eyes. How many children have brown eyes?

- b** **9%** of **500** children are left handed. How many children are left handed?

2 marks

3 Which is more? Tick (✓) the box.

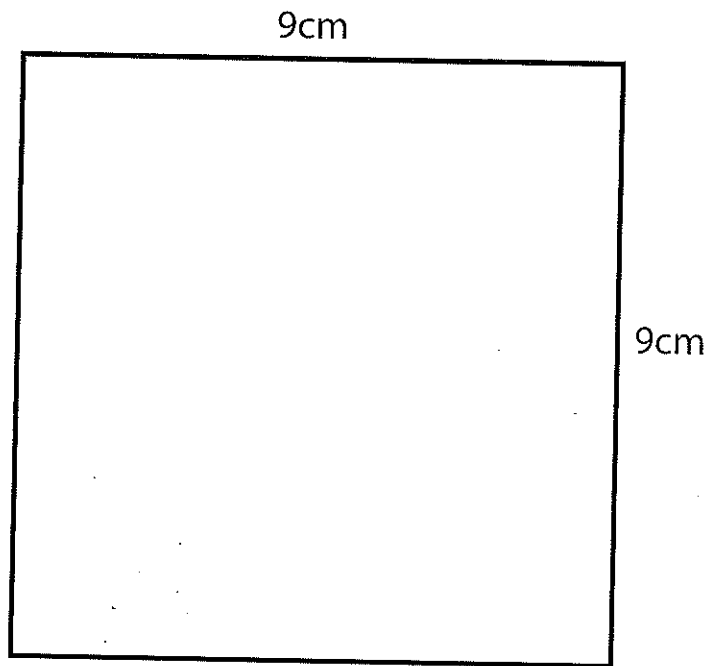
80% of £250

or

40% of £450

2 marks

4 The actual base of Mr Haworth's new garage will be **98** times the size of the square below.



Use this box for your working out.

What will **each side** of the actual base measure **in metres?**

metres

2 marks

- 5 Mr Williams wanted to buy some mussels to put on his pizza.


The shopkeeper weighed out **985** grams of mussels.

Mr Williams said there were far too many mussels and he wanted  $\frac{1}{5}$  of that amount.

What weight of mussels would this be?

Use this box for your working out.

g



2 marks

- 6  $\frac{4}{7}$  of the tennis team are girls.

There are **28** children in the team altogether.



How many are boys?

2 marks

- 7 There are **7** red cubes for every **5** blue cubes.  
There are **48** cubes altogether.

How many of the cubes are blue?

blue cubes

2 marks

8 Solve the following by filling in the missing numbers.

a  + 14 = 35

b 48 -  = 26

c  x 16 = 176

2 marks

9 Rulers cost **20p** each. Look at the formula below which shows how to calculate the cost of any number of rulers.

Total cost =  $20n$  pence

What does ' $n$ ' stand for?

2 marks

10 Describe the pattern in the number sequence below.

13, 20, 27, 34, 41,

Use this box to describe the pattern.

2 marks

Y6: rpa-C

11 Look at the sequence below.

5,	9,	13,	17,	21,
1st	2nd	3rd	4th	5th

Rajeev says the formula for the sequence is  $(n \times 4) + 1$

( $n = 1^{\text{st}}, 2^{\text{nd}}, 3^{\text{rd}}, 4^{\text{th}}$  number etc)

Use the formula to find the **22<sup>nd</sup>** number in the sequence.

$$(\square \times 4) + 1 = \square$$

2 marks


12 Find the value of 'a' in the equations below.

a  $13 - 6 = a$  a=

b  $9 \times a = 27$  a=

c  $a \div 7 = 5$  a=

2 marks

13 Circle  represents 32. Look at the equation below.

$$\text{circle} = \text{triangle} + \text{triangle}$$

What does  represent?

2 marks

- 14  $b + 1 = 6$ . Use this information to find the value of 'a' and 'b'.

$$a + 6 = b + 7$$

$$a = \square$$

$$b = \square$$

2 marks

- 15 Look at the equation below. Find 3 different pairs of values for 'a' and 'b'.

$$a \times b = 24$$

$$\begin{array}{cc} a & b \\ \square & \times \square \end{array}$$

$$\begin{array}{cc} a & b \\ \square & \times \square \end{array}$$

$$\begin{array}{cc} a & b \\ \square & \times \square \end{array}$$

2 marks

End of Test

Page Total  

TEST TOTAL

/ 30

PERCENTAGE SCORE

%