

GCSE MATHEMATICS

Topic tests - Higher tier - Number

Name _____



1 (a) You are given that

$$1 \text{ pound} = \frac{5}{11} \text{ kg}$$

Use this to change 9 pounds into kilograms.

Give your answer as a mixed number

[3 marks]

Answer _____ kg

1 (b) Is $\frac{5}{11}$ greater than $\frac{9}{20}$?

You **must** show your working.

[1 mark]

2 An amount increased by 10% to 517

What was the original amount?

[3 marks]

Answer _____

- 3 A water container is $\frac{1}{8}$ full.
45 litres of water are poured into the container.
The container is now $\frac{3}{4}$ full.

When the container is full, how much water does it hold?

[4 marks]

Answer _____ litres

4 (a) Write 2.46×10^{-3} as an ordinary number.

[1 mark]

Answer _____

4 (b) Work out the value of $(1.8 \times 10^5) \div (9 \times 10^2)$

Give your answer in standard form.

[2 marks]

Answer _____

5 (a) Work out the value of $\sqrt{2} \times \sqrt{32}$

[2 marks]

Answer _____

5 (b) Rationalise the denominator and simplify $\frac{21}{\sqrt{7}}$

[2 marks]

Answer _____

5 (c) Work out $(\sqrt{6} + \sqrt{12})^2$

Give your answer in the form $c + d\sqrt{2}$ where c and d are integers.

[3 marks]

Answer _____

6 Put these in order starting with the smallest.

You **must** show the value of each number in your working.

[4 marks]

$$9^{\frac{1}{2}}$$

$$(-7)^0$$

$$\left(\frac{1}{8}\right)^{\frac{1}{3}}$$

Smallest _____

Largest _____

END OF QUESTIONS