

Number

GCSE Maths · Practice Questions

20 questions · 53 marks total

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Section A · Foundation

Questions 1–3 are the most straightforward; they get harder as you go on. Question 10 is the most challenging.

1

[1 mark]

Work out $7 + 2 \times 6$

.....

2

[2 marks]

Write 45% as

(a) a decimal

(b) a fraction in its simplest form.

.....

3

[2 marks]

Write down the value of

(a) 5^2

(b) $\sqrt{81}$

.....

4

[2 marks]

Work out $\frac{3}{8}$ of 240

.....

5

[2 marks]

Write 90 as a product of its prime factors. Give your answer in index form.

.....

6

[3 marks]

Work out $\frac{2}{3} + \frac{1}{4}$

Give your answer as a fraction in its simplest form.

7

[3 marks]

A coat costs £80.

In a sale the price is reduced by 15%.

Work out the sale price of the coat.

8

[3 marks]

(a) Write 0.0037 in standard form.

(b) Write 5.2×10^3 as an ordinary number.

9

[4 marks]

Find

(a) the highest common factor (HCF) of 42 and 70

(b) the lowest common multiple (LCM) of 42 and 70.

10

[4 marks]

At a bus station, buses to Leeds leave every 12 minutes and buses to York leave every 18 minutes.

At 9 am a bus to Leeds and a bus to York leave at the same time.

(a) At what time do a Leeds bus and a York bus next leave together?

(b) Including the 9 am departure, how many times do they leave together up to and including 12 noon?

Higher-tier style. Again, questions 1–3 are the gentlest and question 10 is the hardest.

1 [2 marks]

Evaluate

(a) 3^{-2}

(b) $16^{1/2}$

.....

2 [2 marks]

Simplify fully $\sqrt{72}$

.....

3 [2 marks]

Work out $(4 \times 10^5) \times (3 \times 10^{-2})$

Give your answer in standard form.

.....

4 [2 marks]

Rationalise the denominator of $\frac{6}{\sqrt{3}}$ and simplify your answer.

.....

5 [3 marks]

Write the recurring decimal $0.2\overline{7}$ (that is, $0.272727\dots$) as a fraction in its simplest form.

.....

6 [3 marks]

Expand and simplify $(3 + \sqrt{5})(2 - \sqrt{5})$

.....

7

[3 marks]

The length of a rod is 12.4 cm, correct to 1 decimal place.

(a) Write down the error interval for the length.

(b) Four of these rods are joined to make a square. Work out the upper bound of the perimeter.

8

[3 marks]

$x = 4.6$ and $y = 2.3$, each correct to 1 decimal place.

Work out the upper bound of $\frac{x}{y}$. Give your answer to 3 significant figures.

9

[3 marks]

Evaluate $\frac{16}{81}^{-3/4}$

Give your answer as a fraction.

10

[4 marks]

A car travels 96 metres, measured to the nearest metre, in 7.2 seconds, measured to 1 decimal place.

(a) Calculate the upper bound for the average speed of the car. Give your answer to 3 significant figures.

(b) Explain which bounds you used and why.
