

GCSE Maths Decimals, Rounding and Estimation (Higher): check-up and exam-style questions: answers

GCSE Maths - Decimals, Rounding and Estimation - Higher - Test yourself

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/gcse/maths/ch04-decimals-rounding-estimation/higher/check-up-and-exam-style-questions/

Exercise 4Z Check-up (non-calculator) Non-calculator

- 1 Write these numbers in order, smallest first: 0.5, 0.45, 0.405, 0.054

Answer: 0.054, 0.405, 0.45, 0.5

- 2 Work out $4.7 + 12.85$.

Answer: 17.55

- 3 Work out $10 - 3.64$.

Answer: 6.36

- 4 Work out 0.6×0.07 .

Answer: 0.042

- 5 Work out $7.2 \div 0.4$.

Answer: 18

- 6 Write 0.35 as a fraction in its simplest form.

Answer: $\frac{7}{20}$

- 7 Round 4.0753 to 2 decimal places.

Answer: 4.08

- 8 Write 0.04067 correct to 2 significant figures.

Answer: 0.041

- 9 Work out an estimate for 4.9×31.2 .

Answer: 150

- 10 The number x is 2.7 correct to 1 decimal place. Write down the error interval for x .

Answer: $2.65 \leq x < 2.75$

Exercise 4X Exam-style questions Non-calculator

- 1 Work out $36.5 - 8.74$. [2 marks]

Answer: 27.76

- 2 Work out 2.8×0.35 . [2 marks]

Answer: 0.98

3 Work out $15.12 \div 0.7$. [3 marks]

Answer: 21.6

4 Write 0.45 as a fraction in its simplest form. [2 marks]

Answer: $\frac{9}{20}$

5 Write these numbers in order, starting with the smallest. $\frac{7}{8}$, 0.65, $\frac{3}{5}$, 0.7 [3 marks]

Answer: $\frac{3}{5}$, 0.65, 0.7, $\frac{7}{8}$

6 (a) Write 12.0672 correct to 2 decimal places. (b) Write 0.00493 correct to 2 significant figures. [2 marks]

(a) 12.0672 to 2 decimal places

Answer: 12.07

(b) 0.00493 to 2 significant figures

Answer: 0.0049

7 Work out an estimate for $\frac{4.87 \times 31.2}{0.52}$. You must show your working. [3 marks]

Answer: 300

8 Gina uses her calculator and says that $4.8 \times 31 = 1488$. Without working out the exact answer, show that Gina is wrong. [2 marks]

Answer: Estimate 150; 1488 is about 10 times too big

9 Pens cost £1.35 each. Priya buys 12 pens and pays with a £20 note. How much change does she get?

Answer: £3.80 [3 marks]

10 The length of a path is 8.5 m, correct to 1 decimal place. Write down the error interval for the length.

Answer: $8.45 \leq L < 8.55$ [2 marks]

11 A bag of sugar is labelled 1.5 kg, correct to 1 decimal place. (a) Write down the lower bound and the upper bound of the mass. (b) Could the mass of the sugar be 1.56 kg? Give a reason. [3 marks]

(a) lower bound and upper bound

Answer: lower bound 1.45 kg, upper bound 1.55 kg

(b) 1.56 kg

Answer: No

12 A number is 6.7 when truncated to 1 decimal place. Write down the error interval for the number. [2 marks]

Answer: $6.7 \leq x < 6.8$

13 A rectangle has length 6.4 cm and width 3.2 cm, each correct to 1 decimal place. Work out the lower bound and the upper bound of the area of the rectangle. [4 marks]

Answer: lower bound 20.0025 cm^2 , upper bound 20.9625 cm^2

14 A train travels 250 km, correct to the nearest 10 km, in 3.2 hours, correct to 1 decimal place. Work out the average speed in km/h. Give your answer to a suitable degree of accuracy. You must show all your working.

Answer: 80 km/h (to 1 s.f.)

[5 marks]

- 15** A rectangle has an area of 24 cm^2 , correct to the nearest cm^2 , and a width of 4 cm, correct to the nearest cm. Work out the upper bound of the length of the rectangle. [3 marks]

Answer: 7 cm

- 16** Work out an estimate for $\sqrt{9.8 \times 41}$. [3 marks]

Answer: 20