Using a calculator

Worked solutions

GCSE Maths topic practice

This topic online

1 Use your calculator to work out

a. 4.7^2

b. 3.1^3

(2 marks)

a) x^2 key

$4.7^2 = 22.09$

22.09

b) x^3 key

$3.1^3 = 29.791$

29.791

2 Use your calculator to work out

a. √17.64

b. the cube root of 15.625

(2 marks)

a) √ key

$\sqrt{17.64} = 4.2$

4.2

b) cube root key

$\sqrt[3]{15.625} = 2.5$

check

$2.5 \times 2.5 \times 2.5 = 15.625$

2.5

3 Use your calculator to work out

(6.3 + 2.48) × 1.6

Write down all the figures on your calculator display.

(2 marks)

Brackets first

$6.3 + 2.48 = 8.78$

$8.78 \times 1.6 = 14.048$

14.048

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4 a. Ade works out the cost of some cinema snacks, in pounds. His calculator shows 7.2
Write down the cost as an amount of money.

b. Ade works out the time a coach journey takes, in hours. His calculator shows 2.4
Write down the time in hours and minutes.

(2 marks)

a) Money has 2 decimal places

£7.20

b) 0.4 of an hour into minutes

$0.4 \times 60 = 24$

2 hours 24 minutes

5 a. Use your calculator to work out

$$\frac{12.6 + 8.1}{4.5 - 1.2}$$

Give your answer correct to 2 decimal places.

b. Sam types 12.6 + 8.1 ÷ 4.5 − 1.2 into his calculator and gets 13.2
Explain the mistake Sam has made.

(3 marks)

a) Top

$12.6 + 8.1 = 20.7$

Bottom

$4.5 - 1.2 = 3.3$

$20.7 \div 3.3 = 6.272727...$

6.27

b) Without brackets ÷ is done first

$12.6 + 1.8 - 1.2 = 13.2$

Type $(12.6 + 8.1) \div (4.5 - 1.2)$

He left out the brackets

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6 Use your calculator to work out

$(\frac{3}{8} + \frac{5}{12}) \div \frac{2}{3}$

Give your answer as a fraction in its simplest form. (2 marks)

Fraction key, brackets first

$\frac{3}{8} + \frac{5}{12} = \frac{19}{24}$

$\frac{19}{24} \div \frac{2}{3} = \frac{19}{16}$

Check by hand

$\frac{19}{24} \times \frac{3}{2} = \frac{57}{48}$

$= \frac{19}{16}$

$\boxed{\frac{19}{16}}$

7 Use your calculator to work out

$\sqrt{(3.2^2 + 6^2)}$ (2 marks)

Inside the root first

$3.2^2 = 10.24$

$6^2 = 36$

$10.24 + 36 = 46.24$

$\sqrt{46.24} = 6.8$

$\boxed{6.8}$

8 Petrol costs 142.9p per litre.

Hana buys 36.5 litres of petrol.

Work out how much she pays. Give your answer in pounds, to the nearest penny. (2 marks)

$142.9 \times 36.5 = 5215.85$

pence to pounds

$5215.85 \div 100 = 52.1585$

nearest penny = 2 decimal places

$\boxed{£52.16}$

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9 a. Use your calculator to work out $(6.4 \times 10^7) \div (1.6 \times 10^3)$
Give your answer in standard form.

b. Ella's calculator shows the answer to a different calculation as 2.5×10^{-3}
Write this as an ordinary number.

(2 marks)

a) Use the $\times 10^x$ key and brackets

$6.4 \div 1.6 = 4$

$10^7 \div 10^3 = 10^4$

4×10^4

b) 10^{-3} means $\div 1000$

$2.5 \div 1000 = 0.0025$

0.0025

10 Use your calculator to work out

$$\frac{5.6^3 - \sqrt{200}}{2.1 + 0.35^2}$$

a. Write down all the figures on your calculator display.

b. Give your answer to part (a) correct to 3 significant figures.

(3 marks)

a) Top

$5.6^3 = 175.616$

$\sqrt{200} = 14.14213562...$

$175.616 - 14.14213562... = 161.4738644...$

Bottom

$0.35^2 = 0.1225$

$2.1 + 0.1225 = 2.2225$

$161.4738644... \div 2.2225 = 72.65415720...$

72.65415720

b) 3rd significant figure is 6, next digit 5 rounds up

72.7

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