

Q1

1a

Input this into your calculator
The answer is exact (it does not need rounding)

43.736 [2]

1b

Find the 1st significant figure

1st significant figure is 4

Check if it needs rounding up (by seeing if the 2nd significant figure is 5 or more)

2nd significant figure is 3 (< 5)
1st significant figure does not need rounding up

Write down the 1st significant figure and use zeros as place-holders to complete the number

40 [1]

Q2-3

2

Input this into your calculator

1.5176868 [2]

Seeing "1.5176" scores full marks (to allow for different calculator displays)

3a

Input this into your calculator
The answer is exact (it does not need rounding)

18.75 [2]

3b

Find the 1st significant figure

1st significant figure is 1

Check if it needs rounding up (by seeing if the 2nd significant figure is 5 or more)

2nd significant figure is 8 (≥ 5)
1st significant figure needs rounding up to 2

Write down the rounded 1st significant figure, 2, and use zeros as place-holders to complete the number

20 [1]

Q4-5

4

Type the equation in to your calculator as seen, your calculator should have a button which looks like $\times 10^x$ or similar to help input standard form

5830 000 [2]

5

1 million = 1 000 000 so 100 million = 100 000 000. Use your calculator to square root it.

$$\sqrt{100\,000\,000}$$

10 000 [1]

Q6

6a

You should be able to use the square root button, $\sqrt{\square}$, on your calculator and type this question in directly, you can also make use of the power (index) button, x^{\square} and the fraction button $\frac{\square}{\square}$

If you work the problem out in stages,

$$\sqrt{\frac{4.8^2 + 3.6^2}{4}} = \sqrt{\frac{36}{4}} = \sqrt{9}$$

3 [2]

6b

You should be able to use the standard form button, $\times 10^x$, on your calculator and type this question in directly

You can also make use of the fraction button, $\frac{\square}{\square}$, and be sure to use brackets as they are presented in the question

 4×10^{-5} [2]

Your calculator may give you a fraction as the answer, $\frac{1}{2500}$, as the question does not specify a form for your answer, this would be correct too.

You should always check to see if the question asks for the answer to be presented as a fraction or decimal, or in standard form

Q7-9

7

Input this directly into your calculator.

$$\frac{\sqrt{17+4^2}}{7.3^2} = 0.1077981356...$$

(If you decide to calculate the numerator and denominator separately, **do not round** them in the subsequent division; store the exact values in your calculator or calculate the numerator then do "Ans \div 7.3²")

0.1077981356 [2]

"0.11" or "0.108" scores 1 mark only

Calculator displays may vary but you must write at least as far as "0.1077..." to achieve full marks

8

Input this directly into your calculator.

$$4.2 \times 10^3 + 5.3 \times 10^2 = 4730$$

[1]

Write the answer in standard form; $a \times 10^b$ where a is a number between 1 and 10 and b is an integer.

 4.73×10^3 [1]

9

Use the fraction button and square root button on your calculator to type the whole expression in in one go.

80 [1]

Q10-11

10

Perform the calculation using your calculator.

Use the fraction button on your calculator and use the arrow keys to move around the calculator screen to make it look just like the given calculation.

$$\frac{5}{8} + \sqrt[3]{340} = 7.60453204\dots$$

[1]

Round your answer to 3 s.f.

7.60 [1]

Answers between 7.604 and 7.605 will be accepted.

11

Type the calculation into your calculator and press "equals"

6.59488...

Round your answer to 3 significant figures

6.59 [1]

Q12

12

Simply put the calculation into your calculator.

On older calculators you will need to pay attention to BIDMAS/ order of operations- 6.4^2 first, then add 2.38, then square root

6.583312236 [1]

Write down all the digits in your calculator display