

Check out

You should now be able to ...

✓	Questions
✓	Know and use the correct order of operations. 7
✓	Use a range of mental and written strategies for decimal calculations. 6
✓	Use a calculator for complex calculations. 8
✓	Interpret the calculator display. 7, 8

Test it

Questions

1
2 - 5
6
7, 8



Language

Meaning

Example

Equivalent integer calculation	Using powers of 10 to simplify a calculation.	$\frac{0.004}{0.0002} = \frac{40}{2} = 20$
Order of operations	A standard order of doing operations in a calculation: B brackets I powers/indices D division M multiplication A addition S subtraction.	$\begin{aligned} &3 + (4^2 - 7 \times 2) \\ &= 3 + (16 - 14) \\ &= 5 \end{aligned}$
Rounding errors	Errors that occur by rounding an intermediate answer in a calculation.	$\begin{aligned} &2 - 3 \div 2 = 2 - 1.5 = 0.5 \checkmark \\ &\text{With intermediate rounding} \\ &= 2 - 2 = 0 \times \end{aligned}$

1 Work out each of these using a calculator.

Give your answers to 2 dp.

- a** $(5.3)^3 - 2.7 \div 3.14$
b $(6.9 - 4.02)^2 \div 2$
c $4\frac{1}{8} \times (6.3 - 2.5)$
d $\frac{8}{(8.3 - 3.1)^3}$
e $9 + \frac{3}{4} \div 3.6$
f $\frac{2.1}{5.6^3} - 9.4^2$

2 Work out these without using a calculator.

- a** $0.383 + 5.48 + 89.1$
b $103.2 + 25.11 + 1.57$
c $9.56 - 0.892 + 0.09$
d $44.42 - 0.147 - 0.0319$

3 Calculate these using a written method

- a** 33×5.52
b 71×0.49
c 2.9×1.56
d 0.47×0.0672

4 Use a written method to work out these products.

- a** 23.1×5.2
b 0.52×7.9
c 6.96×3.2
d 1.34×5.39

5 Calculate these, give your answer to 3 sf.

- a** $755 \div 5.7$
b $633.6 \div 0.92$
c $486.3 \div 0.07$
d $0.019 \div 0.71$
e $0.037 \div 0.00741$

6 Calculate the following, give your answers to 2 dp.

- a** $\frac{(1.9 \times 10^3 + 7.8 \times 10^2)^3}{(2.6 \times 10^{-3})^{-4}}$
b $\frac{8 - 2.7 \times 10^{-3}}{(8.1 \times 10^3 - 6) \times (9.03 \times 10^{-2})^3}$

7 The nearest the planet Mars has ever been to earth is 5.6×10^7 km and the furthest is 4.01×10^8 km.

- a** What is the difference between these two distances?
b What is the maximum amount of time it could take to travel to Mars if your average speed is 3.8×10^4 km/h?
 Give your answer in days and hours and minutes

8 Do these divisions on a calculator and give your answer in the form stated.

- a** $\pounds 50 \div 7$ (£ and p)
b $30 \text{ cm} \div 9$ (nearest mm)
c $12 \text{ days} \div 15$ (hours and minutes)

What next?

Score	0 - 3	4 - 6	7 - 8
	Your knowledge of this topic is still developing. To improve look at Formative test: 3C-7; MyMaths 1007, 1011, 1167, 1923, 1932 and 1933	You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 132, 133 and 134	You have mastered this topic. Well done, you are ready to progress!