

# Calculator skills 1

These calculator keys are really useful:

|          |  |                       |  |
|----------|--|-----------------------|--|
| $x^2$    | Square a number.                           | $(-)$                 | Enter a negative number.   |
| $x^3$    | Cube a number.                             | $\sqrt{\square}$      | Find the square root of a number.  |
| $x^{-1}$ | Find the reciprocal of a number.           | $\sqrt[3]{\square}$   | Find the cube root of a number. You might need to press the shift key first.               |
| Ans      | Use your previous answer in a calculation. | S $\leftrightarrow$ D | Change the answer from a fraction or surd to a decimal. Not all calculators have this key. |

## Rounding rules

- To **round** a number, you look at the next digit on the right.  
5 or more  $\rightarrow$  round up    less than 5  $\rightarrow$  round down
- Decimals can be rounded to a given number of **decimal places** (d.p.).  
 $6.475 = 6.48$  correct to 2 d.p.
- To write a number correct to **3 significant figures** (3 s.f.), look at the fourth significant figure.  
 $0.003\,079 = 0.003\,08$  to 3 s.f.
- Leading zeros in decimals are not counted as significant.
- Remember that the rule for significant figures still applies to **whole numbers**.  
 $27 = 30$  to 1 s.f.

### Worked example

Target grade 4

- (a) Work out the value of  $\frac{\sqrt{8.3}}{12.5 - 7.3}$   
Give your answer as a decimal.  
Write down all the figures on your calculator display. (2 marks)

$$\frac{\sqrt{8.3}}{12.5 - 7.3} = \frac{2.88097}{5.2} = 0.554033088$$

- (b) Find the reciprocal of 12.5. Give your answer as a decimal. (1 mark)
- $$1 \div 12.5 = 0.08$$

### Examiners' report

If you have to work out a calculation like this in your exam, you should work out the numerator (top) and denominator (bottom) **separately**, and **write them both down**. Then divide to work out the final answer. Read the question carefully. You have to write down **all the figures** from your calculator display.

Real students have struggled with questions like this in recent exams – **be prepared!**



Read the question carefully. You have to give the answer as a **decimal**, so you might need to use the S $\leftrightarrow$ D button on your calculator.

### Now try this

Target grade 4

- (a) Work out the value of  $\frac{6.1 + 7.5}{1.8^2}$   
Give your answer as a decimal.  
Write down all the figures on your calculator display. (2 marks)

- (b) Give your answer to part (a) correct to 3 significant figures. (1 mark)

Make sure you write down three significant figures even if the last digit is a zero.