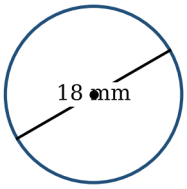
Day 31	B Tier 10-a-day

1 Write 27.4291
(a) correct to 2 decimal places,
(b) correct to 3 significant figures.

2 The diagram shows a circle with diameter 18 mm.
Work out the circumference of the circle.
Give your answer in terms of π.
The diagram is not drawn accurately.



3 Simplify fully
(a) $4t^9 \div 2t^5$
(b) $(a^2)^3$

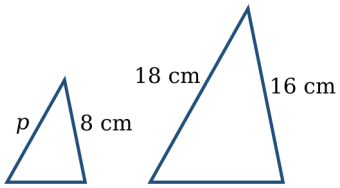
4 The scale of a map is 1 : 25,000.
Two towns are 3 cm apart on the map.
Work out the real distance between the towns.
Give your answer in kilometres.

5 The price of a laptop is £60.
The price is first increased by 40%, then the new price is reduced by 10%.
(a) Work out the final price.
(b) Work out the overall percentage increase in the price.

Day 31 **B Tier 10-a-day**

6 3 workers take 40 days to dig a trench.
All the workers work at the same rate.
How long would it take 8 workers?

7 The two triangles are similar.
(a) Write down the scale factor of the enlargement from the smaller triangle to the larger triangle.
(b) Work out the value of p.
The diagram is not drawn accurately.



8 There are 7.9×10^5 cells in a sample.
The number doubles every day.
How many are there after 3 days?
Give your answer in standard form.

9 Here is an iteration formula.
$x_{n+1} = \sqrt{5x_n + 1}$
$x_0 = 3$
(a) Work out x_1
(b) Work out x_2. Give your answer correct to 3 decimal places. (Calculator)

10 Calculate the length of a. (Calculator)
Give your answer correct to 1 decimal place.
The diagram is not drawn accurately.

