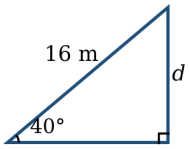
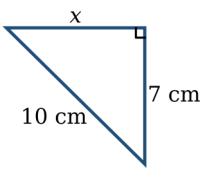
Day 206	B Tier 10-a-day
1 Calculate the length of d. (Calculator) Give your answer correct to 1 decimal place. The diagram is not drawn accurately.  	
2 Work out (a) $\sqrt[3]{343} \times 3$ (b) the square root of 9	
3 The scale of a map is 1 : 100,000. Two villages are 8 km apart. How far apart are they on the map? Give your answer in centimetres.	
4 Solve $\frac{x - 3}{5} = 3$	
5 Two buses leave a bus station at 09:15. One bus leaves every 16 minutes. The other bus leaves every 10 minutes. At what time do both buses next leave together?	

Day 206	B Tier 10-a-day

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



7 The price of a laptop is £160.
The price is first reduced by 5%, then the new price is reduced by 20%.
(a) Work out the final price.
(b) Work out the overall percentage decrease in the price.

8 Maya invests £2,000 in an account paying 6% compound interest per year. (Calculator)
Work out the value of her investment after 2 years.

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

10 40 fish in a lake are caught, tagged and returned to the lake.
Later, a sample of 60 fish is caught and 10 of them are tagged.
Estimate the total number of fish in the lake.