Day 260	B Tier 10-a-day
1 Here is a number machine. Input → × 2 → + 8 → Output (a) The input is 11. Work out the output. (b) The output is 16. Work out the input.	
2 Write 97.549 (a) correct to 2 decimal places, (b) correct to 3 significant figures.	
3 Solve $x^2 - 4x + 3 = 0$	
4 Pasta is sold in two sizes. Small: 500 g for £2.25 Large: 750 g for £2.92 Which size is better value for money? You must show your working.	
5 A is the point (−5, −4) and B is the point (−2, −2). (Calculator) (a) Work out the coordinates of the midpoint of AB. (b) Work out the length of AB. Give your answer correct to 1 decimal place.	

Day 260 **B Tier 10-a-day**

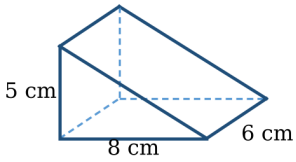
6 A paddling pool is $\frac{1}{3}$ full.

50 litres of water are added.

The paddling pool is now $\frac{1}{2}$ full.

Work out the capacity of the paddling pool.

7 The diagram shows a prism.
Its cross-section is a right-angled triangle.
Calculate the volume of the prism.
The diagram is not drawn accurately.



8 Simplify fully
(a) $3p \times 3q$
(b) $30m^2 \div 5m$

9 Two lights flash at 11:15.
One light flashes every 24 minutes.
The other light flashes every 15 minutes.
At what time do both lights next flash together?

10 The cumulative frequency graph shows the times taken by 40 students to complete a puzzle.
(a) Use the graph to estimate the median.
(b) Work out an estimate for the interquartile range.

