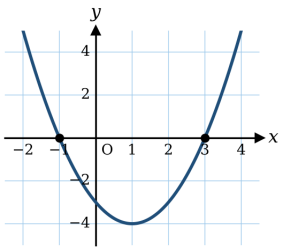
Day 42	A Tier 10-a-day
1 Angle ABL is drawn on a piece of paper. A point P moves so that it is always the same distance from line BA and line BL. Describe the locus of P.	
2 x = 3.18 has been truncated to 2 decimal places. Write down the error interval for x.	
3 Here are the first four terms of a sequence. 14, 21, 28, 35 (a) Find an expression for the nth term. (b) Is 252 a term of this sequence? You must show your working.	
4 Work out $\frac{3.9 \times 4.2}{2.4}$ (Calculator) Give your answer correct to 3 significant figures.	
5 A bag contains red counters and blue counters in the ratio 5 : 7. 5 more blue counters are added to the bag. The ratio of red counters to blue counters is now 5 : 8. How many counters were in the bag at the start?	

Day 42 **A Tier 10-a-day**

6 The diagram shows the graph of $y = x^2 + bx + c$.
Find the value of b and the value of c.



7 Ella and Maya each invest £4000 for 2 years. (Calculator)
Ella's account pays 2% simple interest per year.
Maya's account pays 2% compound interest per year.
Work out how much more interest Maya earns than Ella.

8 Work out $(1\frac{5}{6} + 3\frac{2}{3}) \div 2\frac{1}{2}$
Give your answer as a mixed number in its simplest form.

9 A solid is made from a cylinder and a cone.
The cylinder has radius 6 cm and height 12 cm.
The cone has the same radius as the cylinder and perpendicular height 8 cm.
Work out the total volume. Give your answer in terms of π.

10 The histogram shows information about the length of some items.
(a) Work out the number of items with a length in the class 0 to 30 mm.
(b) Work out an estimate for the number with a length greater than 55 mm.

