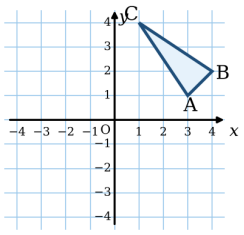
Day 157	B Tier 10-a-day
1 A bag contains 4 black socks and 4 white socks. Nia takes one at random and does not replace it, then takes a second. Work out the probability that both are black.	
2 The diagram shows triangle ABC on a grid. (a) Write down the coordinates of the image of A after a reflection in the line y = x. (b) Write down the coordinates of the image of C after a reflection in the x-axis. 	
3 What fraction of 1 hour is 24 minutes? Give your answer in its simplest form.	
4 Two fair six-sided dice are rolled. Work out the probability that both dice show the same number.	
5 A point P is always exactly 3 m from a lamp post, L. Describe the locus of the point P.	

Day 157	B Tier 10-a-day
6 Expand and simplify $(x + 8)^2$	
7 In a test, the mean mark of 10 Class A is 61. The mean mark of 5 Class B is 79. Work out the mean mark of all 15 students.	
8 Solve $x^2 - 9x + 20 = 0$	
9 The length of a rectangle is 13 cm and its width is 6 cm. Both measurements are correct to the nearest cm. Work out the lower bound for the area of the rectangle.	
10 Triangle XYZ is isosceles with XY = XZ = 12 m. (Calculator) The base YZ = 10 m. Work out the size of angle XYZ. Give your answer correct to 1 decimal place.	