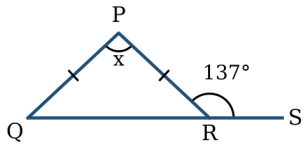
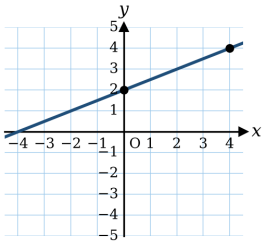
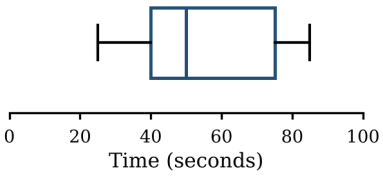
Day 101	A Tier 10-a-day
1 Write $0.6\dot{3}$ as a fraction in its simplest form.	
2 PQR is an isosceles triangle with PQ = PR. QRS is a straight line. Angle PRS = 137°. Work out the size of angle x. The diagram is not drawn accurately. 	
3 Find the equation of the straight line shown. Give your answer in the form y = mx + c 	
4 11 painters take 20 days to paint a hall. All the painters work at the same rate. How many painters are needed to paint a hall in 10 days?	
5 The point P(6, −8) lies on a circle with centre O(0, 0). (a) Work out the equation of the circle, in the form $x^2 + y^2 = r^2$. (b) Find the equation of the tangent to the circle at P.	

Day 101	A Tier 10-a-day

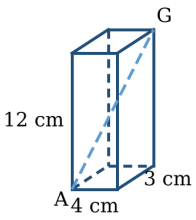
6 The box plot shows the times taken, in seconds, by the students in Class A to run 100 m.
(a) Write down the median and the interquartile range.
For Class B the median is 40 and the interquartile range is 30.
(b) Compare the distributions of the two classes.



7 Solve $3x^2 + 2x - 5 = 0$

8 The value of a car falls by 10% each year. (Calculator)
After 3 years it is worth £14,580.
Work out its value at the start.

9 The diagram shows a cuboid.
Work out the length of the diagonal AG.
The diagram is not drawn accurately.



10 A bag contains 2 yellow, 6 white and 2 black balls.
Two balls are taken at random without replacement.
Work out the probability that the two balls are the same colour.