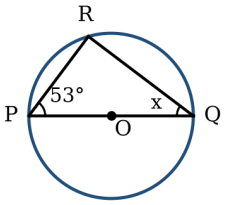
Day 185	A Tier 10-a-day
1 Write these numbers in order of size, starting with the smallest. 73% $\frac{5}{8}$ 0.79 0.33	
2 A straight line passes through the points (1, 3) and (4, 9). Find the equation of the line.	
3 a : b = 4 : 1 b : c = 5 : 7 (a) Work out the ratio a : b : c (b) a, b and c add up to 64. Work out the value of c.	
4 PQ is a diameter of the circle. Angle QPR = 53°. Work out the size of angle x. Give a reason for each step of your working. 	
5 A tank is in the shape of a cuboid measuring 50 cm by 40 cm by 100 cm. It already contains 20 litres of water. Water flows in at 12 litres per minute until the tank is full. Work out how long this takes. Give your answer in minutes.	

Day 185 **A Tier 10-a-day**

6 Rationalise the denominator of $\frac{4}{4\sqrt{2}}$

Give your answer in its simplest form.

7 (a) Show that the equation $x^3 + 5x - 7 = 0$ can be rearranged to give $x = \sqrt[3]{7 - 5x}$

(b) Show that the equation has a solution between x = 1 and x = 2

8 A bag contains red counters and blue counters in the ratio 4 : 1.
7 more red counters are added to the bag.
The ratio of red counters to blue counters is now 9 : 2.
How many counters were in the bag at the start?

9 2 footballs and 2 netballs cost £26.
4 footballs and 2 netballs cost £36.
Work out the cost of one netball.

10 A, B, C and D are points on a circle. AC and BD meet at E.
Angle BAC = 57° and angle ACD = 48°.
Work out the size of angle x (angle AEB).
Give reasons for your working.

