Day 91 **A Tier 10-a-day**

1 Write these numbers in order of size, starting with the smallest.

0.82 $\frac{3}{4}$ 91% 18%

2 Solve $-6(x - 6) = 2(x - 6) - 8$

3 The stem and leaf diagram shows the ages of 11 people.

Key: 2 | 1 represents 21 years

(a) Work out the median age.

(b) Work out the interquartile range.

Stem	Leaf
2	1 3
3	3 5
4	3 7
5	2 6 7 8 9

4 PQ is a straight line.

A point P moves so that it is always 9 cm from the line PQ, on one side of it.

Describe the locus of P.

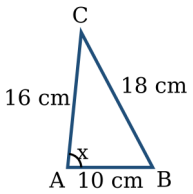
5 A scientist wants to estimate the number of fish in a lake.

She catches 100 fish, marks each one and returns them.

Later she catches a second sample of 40 fish.

10 of these are tagged.

Work out an estimate for the total number of fish in a lake.

Day 91	A Tier 10-a-day
6 A sphere has radius 3 cm. Work out the volume of the sphere. Give your answer in terms of π.	
7 A coach travels for 1 hour 30 minutes at 95 km/h, then for 1 hour at 50 km/h. Work out the average speed for the whole journey.	
8 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately. 	
9 Oscar invests £2,000 in an investment bond. (Calculator) The account pays compound interest at 4% per year. Work out the total interest earned after 4 years.	
10 Solve $\frac{4}{(x+5)} + \frac{1}{(x+2)} = 1$	