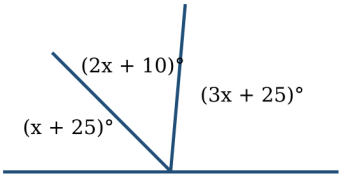
Day 323 **B Tier 10-a-day**

1 The diagram shows 3 angles on a straight line.
Work out the value of x.
The diagram is not drawn accurately.



2 A plumber charges a call-out fee of £18 plus £6 for each hour of work.
(a) Work out the total cost for 7 hours.
(b) The total cost is £102. Work out the number of hours.

3 Write these in order of size.
Start with the smallest.
0.7, 0.4, 75%, $\frac{5}{8}$

4 Expand and simplify $2(x - 6) + 6(x - 3)$

5 The table shows the numbers of brothers and sisters of some students.
Work out the mean.

Siblings	**3**	**4**	**5**	**6**	**7**
Frequency	3	7	9	3	5

Day 323	B Tier 10-a-day
6 Write these numbers in order of size. Start with the smallest. 2.1×10^{-2}, 920,000, 3.6×10^{4}, 0.0027	
7 A cone has base radius 3 cm and vertical height 8 cm. (Calculator) Volume of a cone = $\frac{1}{3}\pi r^2 h$ Work out the volume of the cone. Give your answer correct to 1 decimal place.	
8 The equation $x^3 + x = 63$ has a solution between 3 and 4. (Calculator) Use trial and improvement to find this solution. Give your answer correct to 1 decimal place.	
9 There are 150 visitors. $\frac{3}{10}$ of them are men and the rest are women. $\frac{2}{5}$ of the men and $\frac{4}{5}$ of the women buy a drink. One person is chosen at random. Work out the probability that they buy a drink.	
10 In a sale, the price of a sofa is reduced by 10%. (Calculator) Two weeks later it is reduced by a further 5% of the new price. The final price is £684. Work out the original price of the sofa.	