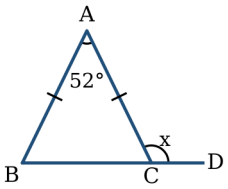
Day 194 **A Tier 10-a-day**

1 ABC is an isosceles triangle with AB = AC.
BCD is a straight line.
Angle BAC = 52°.
Work out the size of angle x.
The diagram is not drawn accurately.



2 Work out the value of $2x^2 + 2x + 1$ when $x = -5$

3 8 workers take 9 days to build a wall.
All the workers work at the same rate.
How many workers are needed to build a wall in 4 days?

4 Solve $\frac{4x + 2}{5} = \frac{3x + 3}{3}$

5 The table shows information about 74 people.
One person is chosen at random.
(a) Find the probability that the person is a child and chose coffee.
(b) The person chose tea. Find the probability that they are an adult.

	Tea	Coffee	Total
Adults	29	20	49
Children	16	9	25
Total	45	29	74

Day 194	A Tier 10-a-day
6 A plank is 21 mm long and a pipe is 17 mm long. Each length is correct to the nearest mm. Work out the lower bound for the difference in their lengths.	
7 A rectangle has length (4x + 3) cm and width (x − 2) cm. The perimeter of the rectangle is 112 cm. (a) Work out the value of x. (b) Work out the area of the rectangle.	
8 Write the recurring decimal $0.\dot{9}\dot{3}$ as a fraction in its simplest form.	
9 Solve the simultaneous equations $x^2 + y^2 = 25$ $y = -3x + 5$	
10 Femi invests £4,500 in a savings account. (Calculator) The account pays compound interest at 1.5% per year. Work out the total interest earned after 5 years.	