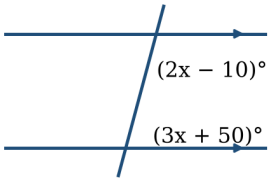
Day 350 **A Tier 10-a-day**

1 No tax is paid on the first £12,500 of income.
Tax of 15% is paid on the next £35,000. Tax of 45% is paid on all income above £47,500.
(Calculator)
Isla earns £68,500 a year.
Work out the income tax paid.

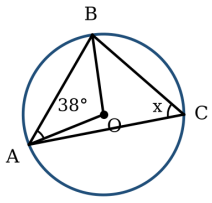
2 The diagram shows two parallel lines crossed by a straight line.
(a) Work out the value of x.
(b) Work out the size of the angle marked $(2x - 10)°$.
The diagram is not drawn accurately.



3 By rounding each number to 1 significant figure, estimate the value of

$$\frac{87.4 + 5.8}{0.83}$$

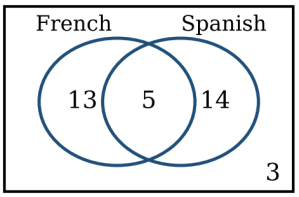
4 A, B and C are points on a circle with centre O.
Angle OAB = 38°.
(a) Work out angle AOB.
(b) Work out the size of angle x.
Give reasons for your answers.



5 $x_{n+1} = \sqrt{6x_n + 11}$
$x_0 = 4$
Work out the values of x_1, x_2 and x_3.
Give your answers correct to 3 decimal places.
(Calculator)

Day 350 **A Tier 10-a-day**

6 The Venn diagram shows information about 35 people.
One person is chosen at random.
(a) The person is in set French. Find the probability that they are also in set Spanish.
(b) The person is not in set Spanish. Find the probability that they are in set French.



7 Write as a single fraction

$$\frac{5}{(x+4)} + \frac{4}{(x-3)}$$

8 A runner travels 370 m in 16.6 s. The distance is measured to the nearest 10 metres and the time to the nearest 0.1 second. (Calculator)
Work out the lower bound for the runner's speed in m/s.
Give your answer correct to 3 significant figures.

9 Make a the subject of $b = \frac{4a + 1}{6}$

10 y is inversely proportional to x.
When x = 4, y = 9.
(a) Find a formula for y in terms of x.
(b) Work out the positive value of x when y = 7.2.