Day 29 **B Tier 10-a-day**

1 Work out the value of 9m + 1 when m = 9

2 A concert starts at 7:55 pm.
It lasts 3 hours 30 minutes.
At what time does it finish? Give your answer using am or pm.

3 $\mathbf{a} = \begin{pmatrix} 2 \\ 0 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$
Work out
(a) $\mathbf{a} + \mathbf{b}$
(b) $3\mathbf{a} - 2\mathbf{b}$

4 Solve 7(2x + 7) = 21

5 The table shows some information about 95 students.
A person is chosen at random.
Find the probability that the person chose "Bus".

	Walk	Bus	Total
Boys	24		53
Girls		28	
Total			95

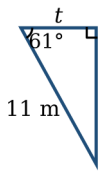
Day 29 **B Tier 10-a-day**

6 (a) Write $\frac{16}{25}$ as a decimal.

(b) Write $\frac{5}{9}$ as a recurring decimal.

For part (b), write down the first 8 decimal places and say which digits repeat.

7 Calculate the length of t. (Calculator)
Give your answer correct to 1 decimal place.
The diagram is not drawn accurately.



8 35 pupils were asked.
22 of them study French and 19 of them study German.
8 of them did both.
(a) How many did neither?
(b) One is chosen at random. Find the probability that they study French but do not study German.

9 There are 7.6×10^2 cells in a sample.
The number doubles every day.
How many are there after 3 days?
Give your answer in standard form.

10 A boat sails 4 km on a bearing of 000° from P to Q, then 5 km on a bearing of 090° to R. (Calculator)
(a) Work out the distance PR.
(b) Work out the bearing of R from P.
Give your answers correct to 1 decimal place.

