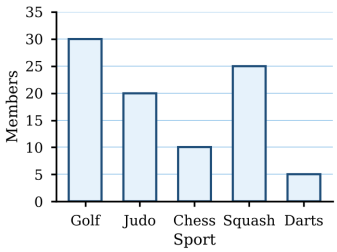
Day 245 **B Tier 10-a-day**

1 Simplify $3p + 6q - 6p + 9q$

2 The bar chart shows some information.
(a) Write down the mode.
(b) What fraction of the total is Chess? Give your answer in its simplest form.

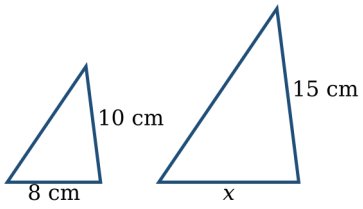


3 Triangle PQR has two sides of 4 cm and 9 cm with an angle of 60° between them.
Triangle DEF has two sides of 9 cm and 4 cm with an angle of 60° between them.
Are the two triangles congruent?
Give a reason for your answer.

4 The table shows the pets owned by each student in a class.
(a) Write down the mode.
(b) Work out the median.

Pets	1	2	3	4
Frequency	3	7	8	4

5 Factorise $x^2 - 14x + 48$

Day 245	B Tier 10-a-day
6 The population of a town is 20,000. (Calculator) It increases by 3% each year. Work out the population after 2 years. Give your answer to the nearest whole number.	
7 The two triangles are similar. (a) Write down the scale factor of the enlargement from the smaller triangle to the larger triangle. (b) Work out the value of x. The diagram is not drawn accurately. 	
8 Solve $x^2 - 2x = 0$	
9 There are 200 bus passengers. $\frac{3}{10}$ of them are adults and the rest are children. $\frac{2}{5}$ of the adults and $\frac{2}{5}$ of the children have a pass. One person is chosen at random. Work out the probability that they have a pass.	
10 There are 3.6×10^5 cells in a sample. The number doubles every day. How many are there after 6 days? Give your answer in standard form.	