Day 243 **B Tier 10-a-day**

1 Simplify fully
(a) $y^{10} \div y^5$
(b) $a^5 \times a^2$

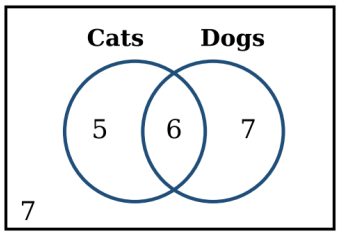
2 Here are the number of customers at a shop each day.
34, 34, 12, 29, 30
(a) Find the median.
(b) Work out the range.

3 (a) Convert 12 tonnes to kg.
(b) Convert 2 litres to cm^3.

4 (a) Solve $11 < 2x + 7 < 15$
(b) Write down the integer values of x that satisfy this inequality.

5 The table shows the shoe sizes of students in a class.
(a) Write down the mode.
(b) Work out the median.

Shoe size	5	6	7	8	9
Frequency	1	3	10	4	2

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6 A triangle has sides of length 3 cm, 6 cm and 4 cm. Is the triangle right-angled? You must show your working.	
7 Work out (a) 2^{-1} (b) $11^0 + \sqrt{64}$	
8 The Venn diagram shows information about 25 people in a street. One of them is chosen at random. Find the probability that the person chose neither Cats nor Dogs. 	
9 A shop sells pens and pencils. All pens cost the same and all pencils cost the same. 2 pens and 2 pencils cost 330p. 4 pens and 2 pencils cost 550p. Work out the cost of one pen and the cost of one pencil.	
10 There are 9×10^3 fish in a lake. The number triples every day. How many are there after 6 days? Give your answer in standard form.	