Day 210 **A Tier 10-a-day**

1 Work out $2\frac{1}{2} \times 4\frac{4}{7}$

Give your answer as a mixed number in its simplest form.

2 Here are the results for 25 households.
(a) Find the median.
(b) Work out the range.

Number of pets	0	1	2	3	4
Frequency	7	8	4	5	1

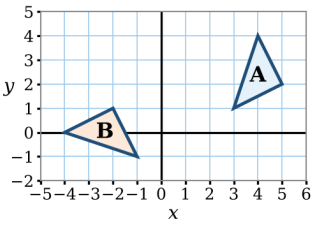
3 Factorise $x^2 + x - 6$

4 Without using a calculator, work out the exact value of
$5 \sin 30° - 6 \cos 30°$
Give your answer in its simplest form.

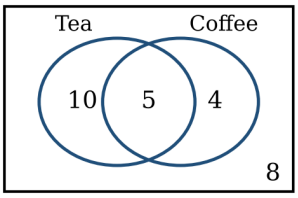
5 Expand and simplify
$(x - 3)^2 - (x - 6)(x + 2)$

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6 Describe fully the single transformation that maps shape A onto shape B.



7 The Venn diagram shows information about 27 people.
One person is chosen at random.
(a) Find the probability that the person is in both Tea and Coffee.
(b) Find the probability that the person is in Tea or Coffee or both.



8 Write $0.4\dot{8}$ as a fraction in its simplest form.

9 A solid is made from a cylinder of radius 3 cm and a hemisphere on top, with the same radius.
The total volume of the solid is 81π cm^3.
Work out the height of the cylinder.

10 Solve $x^2 \geq 100$