Day 192 **A Tier 10-a-day**

1 Write these numbers in order of size, starting with the smallest.

$\frac{5}{8}$ 0.4 0.12 66%

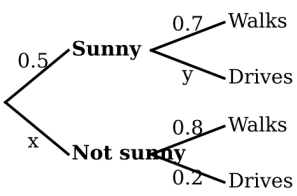
2 The number of members of a gym is increased by 10%.
The new number is then decreased by 50%.
Work out the overall percentage change.

3 (a) Solve $-6 < 3x - 6 \leq 9$
(b) Write down all the integer values of x that satisfy this inequality.

4 Here are four fractions: $\frac{14}{40}$ $\frac{7}{8}$ $\frac{12}{15}$ $\frac{7}{12}$

Which one of these fractions is equal to a recurring decimal?

5 The tree diagram shows probabilities for two events.
(a) Work out the values of x and y.
(b) Work out the probability of sunny and walks.

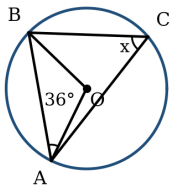


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6 Work out $(2\frac{1}{4} + 3\frac{1}{6}) \div 2\frac{3}{5}$

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

7 A, B and C are points on a circle with centre O.
Angle OAB = 36°.
(a) Work out angle AOB.
(b) Work out the size of angle x.
Give reasons for your answers.



8 y is inversely proportional to x.
When x = 1, y = 10.
(a) Find a formula for y in terms of x.
(b) Work out the value of y when x = 10.

9 The table shows the probabilities of the outcomes of a biased spinner.
(a) Work out the value of x.
(b) The spinner is spun 200 times. Estimate the number of times it lands on green.

Colour	Red	Blue	Green	Yellow
Probability	0.15	x	x	0.05

10 PQR is a right-angled triangle with the right angle at Q.
PR = 12 cm and angle QPR = 60°.
Work out the exact length of PQ.
Do not use a calculator.