Day 337 **A Tier 10-a-day**

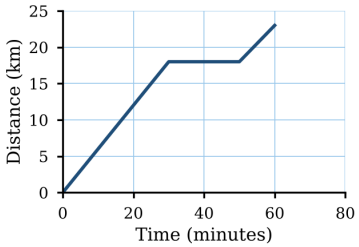
1 Write these numbers in order of size, starting with the smallest.

49% 0.69 $\frac{8}{10}$ $\frac{19}{20}$

2 The graph shows the distance travelled by a van driver.

(a) For how many minutes did the van driver stop?

(b) Work out the speed during the final part of the journey. Give your answer in km/h.



3 Work out $5\frac{1}{2} \times 4\frac{4}{5}$

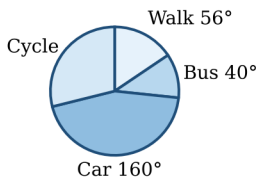
Give your answer as a mixed number in its simplest form.

4 The pie chart shows how some students travel to school.

7 students chose walk.

(a) Work out the angle for cycle.

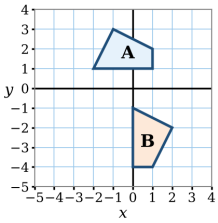
(b) How many students chose cycle?



5 Factorise $4x^2 - 15x - 25$

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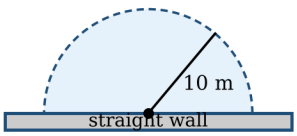
6 Describe fully the single transformation that maps shape A onto shape B.



7 The graph of y = f(x) has a minimum point at (−1, −3).
Write down the coordinates of the turning point of the graph of
(a) y = f(x) − 4
(b) y = −f(x)

8 n is the smallest positive integer such that 45 × n is a square number.
Find the value of n.

9 A horse is tied by a rope of length 10 m to a point on a long straight wall.
The horse can graze on any grass on one side of the wall.
Work out the area it can graze. Give your answer in terms of π.
The diagram is not drawn accurately.



10 A scientist wants to estimate the number of fish in a lake.
She catches 60 fish, marks each one and returns them.
Later she catches a second sample of 40 fish.
6 of these are tagged.
Work out an estimate for the total number of fish in a lake.