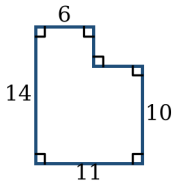
Day 217 **B Tier 10-a-day**

1 The diagram shows the shape of a field.
All the corners are right angles. All lengths are in m.
(a) Find the perimeter.
(b) Find the area.



2 Work out
(a) $9^2 + 5^3$
(b) $\sqrt{100} - 2^2$

3 Complete the table of values for $y = -4x - 1$

x	−2	−1	0	1	2
y			−1	−5	

4 A ladder 25 m long leans against a vertical wall.
The foot of the ladder is 7 m from the wall.
Work out how high up the wall the ladder reaches.

5 In a test, the mean mark of 6 Year 10 is 42.
The mean mark of 4 Year 11 is 62.
Work out the mean mark of all 10 students.

Day 217 **B Tier 10-a-day**

6 Ella has £180.

They spends $\frac{2}{3}$ of the money on a book.

They then spends $\frac{1}{3}$ of the money left on a drink.

How much money is left?

7 A is the point $(-3, -2)$ and B is the point $(-11, 4)$.

(a) Work out the coordinates of the midpoint of AB.

(b) Work out the length of AB.

8 The table shows the times taken by some students to complete a task.

(a) Write down the modal class.

(b) Work out an estimate for the mean.

Time, t (minutes)	Frequency
$0 < t \leq 10$	2
$10 < t \leq 20$	5
$20 < t \leq 30$	3
$30 < t \leq 40$	7
$40 < t \leq 50$	8

9 Simplify fully

(a) $4a^2 \times 6a^6$

(b) $(a^4)^3$

10 A rectangle has length $(x + 2)$ cm and width $(x - 2)$ cm.

The area of the rectangle is 32 cm^2.

(a) Show that $x^2 - 36 = 0$

(b) Hence work out the length of the rectangle.