Day 38 **A Tier 10-a-day**

1 A taxi company charges £4 plus £2 for each mile.
(a) Write a formula for the total cost, £C, after m miles.
(b) Aisha pays £34 in total. Work out the number of miles.

2 Jack is paid £11.20 per hour for a basic week of 35 hours. (Calculator)
Overtime is paid at double time.
Last week Jack worked 5 hours of overtime.
Work out Jack's total pay for the week.

3 A cuboid has length 10 cm and width 12 cm.
Its total surface area is 372 cm^2.
Work out the height of the cuboid.

4 Here is some information about 25 students.
(a) Work out the mean.
(b) Write down the mode.

Number of siblings	0	1	2	3	4
Frequency	7	9	2	6	1

5 A ladder reaches 24 m up a vertical wall.
The ladder is 25 m long.
Work out how far the foot of the ladder is from the wall.

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6 A triangle has base 16.3 m and perpendicular height 7.3 m. (Calculator) Each measurement is correct to the nearest 0.1 m. Work out the upper bound for the area of the triangle.	
7 Write as a single fraction in its simplest form $\frac{x-2}{5} + \frac{x+6}{4}$	
8 The value of an investment grows by 4% each year. (Calculator) After 2 years it is worth £32,448. Work out its value at the start.	
9 Solve $\frac{x-4}{2} + \frac{x+1}{4} = 2$	
10 y is directly proportional to the square of x. When x = 8, y = 256. (a) Find a formula for y in terms of x. (b) Work out the positive value of x when y = 64.	