Day 315 **B Tier 10-a-day**

1 Jo has x football cards.
Ben has 3 more football cards than Jo.
Cara has 4 times as many football cards as Jo.
(a) Write an expression, in terms of x, for the number of football cards Ben has.
(b) Write an expression, in terms of x, for the total number of football cards the three of them have. Give your answer in its simplest form.

2 (a) Convert 7.5 mm to cm.
(b) Convert 2 m^2 to cm^2.

3 The table shows the numbers of brothers and sisters of some students.
(a) Write down the mode.
(b) Work out the median.

Siblings	1	2	3	4	5
Frequency	2	6	2	7	8

4 Zara has $\frac{1}{4}$ of £128.
Ravi has 60% of £140.
Who has more money? You must show your working.

5 The table shows the numbers of brothers and sisters of some students.
Work out the mean.

Siblings	3	4	5	6	7
Frequency	3	2	3	4	8

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6 The area of a circle is 133 cm^2. (Calculator) Work out the radius of the circle. Give your answer correct to 1 decimal place.	
7 (a) Solve $6 < 4x + 6 < 18$ (b) Write down the integer values of x that satisfy this inequality.	
8 A coach travels at 50 km/h for 2 hours and then at 48 km/h for 2 hours. Work out its average speed for the whole journey.	
9 Show that $(n + 4)(n + 3) - n(n + 7)$ has the same value for every whole number n.	
10 In a sale, the price of a sofa is reduced by 20%. (Calculator) Two weeks later it is reduced by a further 25% of the new price. The final price is £90. Work out the original price of the sofa.	