Day 145 **B Tier 10-a-day**

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

Siblings	1	2	3	4
Frequency	5	5	2	6

2 Triangle XYZ is isosceles with XY = XZ.
Angle YXZ = 56°.
Work out the size of angle XYZ.

3 Work out
(a) 5.8 × 0.6
(b) 0.31 × 9

4 Solve 2(2x + 7) = 6

5 Write down all the common factors of 25 and 40.

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6 Two fair 4-sided dice are each rolled once. Each dice is numbered from 1. Work out the probability that both dice show a number greater than 2.	
7 Matchsticks are used to make a row of hexagons. 1 hexagon needs 6 matchsticks, 2 hexagons need 11 and 3 hexagons need 16. (a) Find an expression, in terms of n, for the number of matchsticks needed for n hexagons. (b) Dan uses 146 matchsticks to make a row. How many hexagons are in his row?	
8 Work out $2\frac{3}{5} - 1\frac{5}{6}$ Give your answer as a fraction in its simplest form.	
9 The area of a circle is 67 m^2. (Calculator) Work out the radius of the circle. Give your answer correct to 1 decimal place.	
10 Here is an iteration formula. $x_{n+1} = \sqrt{4x_n + 12}$ $x_0 = 1$ (a) Work out x_1 (b) Work out x_2. Give your answer correct to 3 decimal places. (Calculator)	