Day 353 **B Tier 10-a-day**

1 The table shows the probabilities of a spinner landing on each colour.
(a) Work out the value of x.
(b) The spinner is used 40 times. How many times would you expect Black?

Colour	Pink	White	Orange	Black
Probability	0.3	x	0.05	0.35

2 x is an integer.
Write down the greatest value of x for which $x < 3.7$

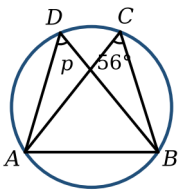
3 A motorbike travels at 162 km/h.
Work out its speed in metres per second.

4 A right-angled triangle has one angle of 24°.
Work out the size of the other acute angle.

5 (a) Write $\frac{19}{50}$ as a decimal.

(b) Write $\frac{2}{9}$ as a recurring decimal.

For part (b), write down the first 8 decimal places and say which digits repeat.

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6 A, B, C and D are points on a circle. Angle ACB = 56°. Work out the size of angle ADB, marked p. Give a reason for your answer. The diagram is not drawn accurately. 	
7 Work out $(3.2 \times 10^6) + (6 \times 10^6)$ Give your answer in standard form.	
8 Work out the value of $x^2 + 2x$ when $x = -3$	
9 Two lights flash at 08:30. One light flashes every 20 minutes. The other light flashes every 6 minutes. At what time do both lights next flash together?	
10 A circle has centre O and radius 10 cm. AB is a chord and M is the midpoint of AB. OM is perpendicular to AB. Work out the value of x. The diagram is not drawn accurately. 