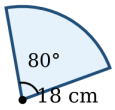
Day 24 **A Tier 10-a-day**

1 Work out $\sqrt{8.3^2 + 5.7^2}$ (Calculator)
Give your answer correct to 3 significant figures.

2 The diagram shows a sector of a circle of radius 18 cm.
Work out the perimeter of the sector.
Give your answer in terms of π.
The diagram is not drawn accurately.



3 Write these numbers in order of size, starting with the smallest.
86% $\frac{3}{5}$ 0.32 0.07

4 The table shows the probabilities of the outcomes of a biased spinner.
(a) Work out the value of y.
(b) The spinner is spun 800 times. Estimate the number of times it lands on 2.

Score	1	2	3	4
Probability	0.25	y	y	0.35

5 A regular octagon and a regular dodecagon share the side AB and are on opposite sides of it.
The two shapes meet at the point A.
Work out the size of the angle at A that is not inside either shape.

Day 24	A Tier 10-a-day
6 $f(x) = 3x - 4$ $g(x) = x^2 + 4$ (a) Find f(3) (b) Find fg(x). Give your answer in its simplest form.	
7 Dev and Ravi each invest £2500 for 2 years. (Calculator) Dev's account pays 5% simple interest per year. Ravi's account pays 5% compound interest per year. Work out how much more interest Ravi earns than Dev.	
8 Write as a single fraction $\frac{4}{(x-3)} + \frac{3}{(x+1)}$	
9 y is directly proportional to the square root of x. When x = 64, y = 64. (a) Find a formula for y in terms of x. (b) Work out the positive value of x when y = 80.	
10 A kite is on the end of a straight string of length 30 m. (Calculator) The string makes an angle of 51° with the horizontal ground. Work out the height of the kite above the ground. Give your answer to 3 significant figures.	