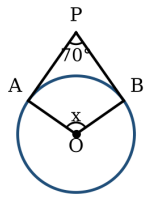
Day 239	A Tier 10-a-day
1 A circular table top has diameter 14 cm. Work out, in terms of π, (a) the circumference, (b) the area.	
2 Expand and simplify $(3x + 1)(x + 5)$	
3 A closed block is a cuboid measuring 4 cm by 12 cm by 9 cm. Work out the total surface area.	
4 A shop sells 4 different shirts, 4 different pairs of trousers and 4 different hats. How many different outfits, made of one shirt, one pair of trousers and one hat, are possible?	
5 Solve $\frac{x + 3}{3} - \frac{x + 1}{6} = 2$	

Day 239 **A Tier 10-a-day**

6 PA and PB are tangents to a circle with centre O.
Angle APB = 70°.
Work out the size of angle x (angle AOB).
Give a reason for each step of your working.



7 Rationalise the denominator of $\frac{9}{\sqrt{5}}$
Give your answer in its simplest form.

8 Zac and Noah each invest £2000 for 3 years. (Calculator)
Zac's account pays 2% simple interest per year.
Noah's account pays 2% compound interest per year.
Work out how much more interest Noah earns than Zac.

9 Solve $\frac{4}{(x-1)} + \frac{6}{(x-4)} = 1$

10 The probability that Lena scores a goal is 0.8.
The probability that Noah scores a goal is 0.1.
The two events are independent.
Work out the probability that neither Lena nor Noah will score a goal.