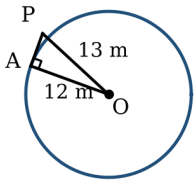
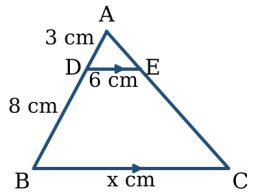
Day 6	A Tier 10-a-day
1 PA is a tangent to a circle with centre O. A is on the circle. The radius is 12 m and OP = 13 m. Work out the length of PA. The diagram is not drawn accurately. 	
2 The exchange rate is £1 = ¥190. (Calculator) Nadia changes £1,150 into Japanese yen. How much does Nadia get in Japanese yen?	
3 Solve $-3(x - 1) = -2(x + 2) + 2$	
4 A swimming pool holds 1.2 m^3 of water. How many litres is this?	
5 The curve C has equation $y = x^2 - 8x + 7$ (a) Find the coordinates of the points where C crosses the x-axis. (b) Find the coordinates of the turning point of C.	

Day 6 **A Tier 10-a-day**

6 A rectangle has length 10 mm and width 22 mm.
Each measurement is correct to the nearest mm.
Work out the upper bound for the perimeter of the rectangle.

7 In triangle ABC, DE is parallel to BC.
D is on AB and E is on AC.
Work out the value of x.
The diagram is not drawn accurately.



8 There are 26 students in a class.
7 students do football and 14 students do hockey.
9 students do neither.
(a) Work out how many students do both.
(b) One student is chosen at random. Find the probability that they do football only.

9 The table gives information about 119 measurements.
A histogram is drawn using this information.
(a) Work out the missing frequency.
(b) Work out the height of the bar for the class $25 < m \leq 40$.

Mass, m (g)	Frequency
$10 < m \leq 25$	?
$25 < m \leq 40$	33
$40 < m \leq 60$	52
$60 < m \leq 65$	7

10 Rationalise the denominator of $\frac{10}{4-\sqrt{6}}$

Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.