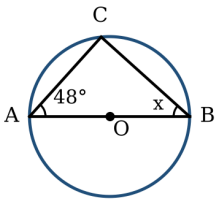
Day 326 **A Tier 10-a-day**

1 AB is a diameter of the circle.
Angle BAC = 48°.
Work out the size of angle x.
Give a reason for each step of your working.



2 (a) Write 0.0054791 correct to 2 significant figures.
(b) Write 3.363 correct to 1 decimal place.

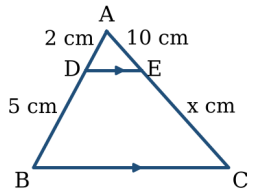
3 The two triangles are similar.
Work out the value of x.
The diagrams are not drawn accurately.



4 By rounding each number to 1 significant figure, estimate the value of

$$\frac{9.6 \times 98}{0.48}$$

5 A cyclist travels for 2 hours at 55 km/h,
then for 30 minutes at 40 km/h.
Work out the average speed for the whole journey.

Day 326	A Tier 10-a-day
6 Make x the subject of $y = 2x^2 + 6$	
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 The graph of y = f(x) has a maximum point at (4, −4). Write down the coordinates of the turning point of the graph of (a) y = −f(x) (b) y = f(x + 1)	
9 Solve $\frac{4}{(x+3)} + \frac{3}{(x+1)} = 1$	
10 A bag contains 5 black pens and 3 blue pens. Three pens are taken at random without replacement. Work out the probability that all three pens are black.	