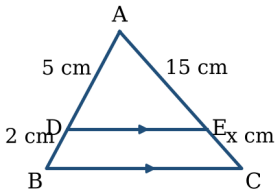
Day 71 **A Tier 10-a-day**

1 Work out $5\frac{2}{3} + 3\frac{2}{7}$

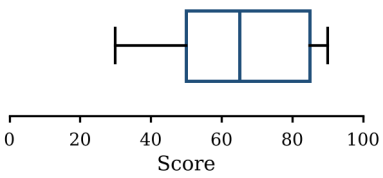
Give your answer as a mixed number in its simplest form.

2 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.



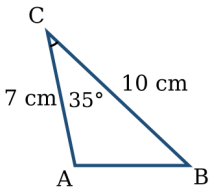
3 f(x) = 3x + 6
$g(x) = x^2 - 9$
(a) Find g(1)
(b) Find gf(x). Expand and simplify your answer.

4 The box plot shows the scores of the students in Class A in a test.
(a) Write down the median and the interquartile range.
For Class B the median is 55 and the interquartile range is 25.
(b) Compare the distributions of the two classes.



5 The line L has equation $y = -\frac{3}{4}x - 5$

Find the equation of the line that is perpendicular to L and passes through the point (3, 5).

Day 71	A Tier 10-a-day
6 Work out the area of triangle ABC. (Calculator) Give your answer to 3 significant figures. The diagram is not drawn accurately.  	
7 The mean age of 7 workers is 58 years. One of them, aged 73, leaves. Work out the mean age of the remaining workers.	
8 The value of a car falls by 20% each year. (Calculator) After 2 years it is worth £23,040. Work out its value at the start.	
9 Solve $\frac{4}{(x+2)} + \frac{5}{(x-5)} = 1$	
10 A sphere has radius 6 cm. Work out the volume of the sphere. Give your answer in terms of π.	