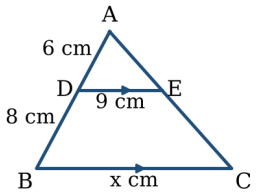
Day 361	A Tier 10-a-day
1 £1 = $1.35. (a) Change £40 to dollars. (b) Change $378 to pounds.	
2 Write $(2^4)^2 \div 2^3$ as a single power of 2.	
3 $f(x) = -2x + 5$ $g(x) = x^2 - 8$ Find fg(1)	
4 (a) A flight takes off at 3:50 pm. The journey takes 3 hours 28 minutes. Work out the time it ends. (b) Change 150 minutes into hours. Give your answer as a decimal.	
5 Change 0.01 m^3 to cm^3.	

Day 361 **A Tier 10-a-day**

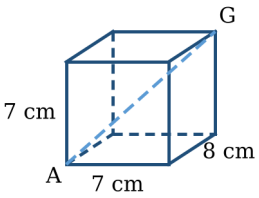
6 In triangle ABC, DE is parallel to BC.
D is on AB and E is on AC.
Work out the value of x.
The diagram is not drawn accurately.



7 One grain of sand has a mass of 4×10^{-3} kg.
A sample contains 3×10^{4} grains of sand.
Work out the total mass of the sample.
Give your answer in standard form.

8 Here are the first five terms of a quadratic sequence.
$-7, -6, -1, 8, 21$
(a) Find an expression for the nth term.
(b) Work out the 12th term.

9 The diagram shows a cuboid.
Work out the length of the diagonal AG.
(Calculator)
Give your answer to 3 significant figures.
The diagram is not drawn accurately.



10 Make x the subject of $y = \frac{3x - 1}{-x + 1}$