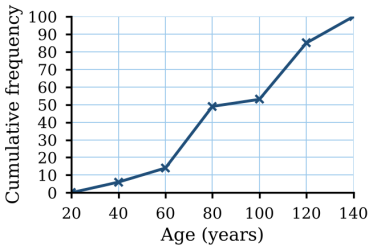
Day 354 **A Tier 10-a-day**

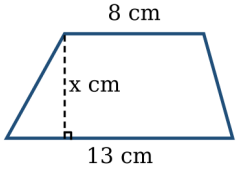
1 The cumulative frequency graph shows information about the age of 100 visitors.
Use the graph to find an estimate for
(a) the median,
(b) the number of visitors with a age greater than 40 years.



2 Expand and simplify
$(x - 2)^2 - (x - 5)(x + 1)$

3 7 painters take 12 days to paint a hall.
All the painters work at the same rate.
How many painters are needed to paint a hall in 14 days?

4 The area of this trapezium is 63 cm^2.
Work out the value of x.
The diagram is not drawn accurately.



5 Oscar has £120.
Oscar spends $\frac{2}{3}$ of the money on a coat and $\frac{2}{5}$ of the money that is left on some shoes.
How much money does Oscar have left?

Day 354	A Tier 10-a-day
6 An isosceles triangle has two equal sides of length $(4x - 1)$ cm and $(3x + 8)$ cm. The third side is 20 cm. Work out the perimeter of the triangle.	
7 The price of a product increases by 40% each year for 2 years. Work out the overall percentage increase over the 2 years.	
8 Jug A contains 8 litres of a mixture of concentrate and water in the ratio 1 : 7. Jug B contains 9 litres of a mixture of concentrate and water in the ratio 5 : 4. The contents of both jugs are mixed together. Work out the ratio of concentrate to water in the mixture. Give your answer in its simplest form.	
9 Solve $\frac{6}{(x - 1)} + \frac{3}{(x + 3)} = 1$	
10 Rationalise the denominator of $\frac{46}{5 - \sqrt{2}}$ Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.	