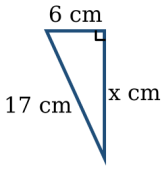
Day 94	A Tier 10-a-day

1 Work out the length of x. (Calculator)
Give your answer to 3 significant figures.
The diagram is not drawn accurately.

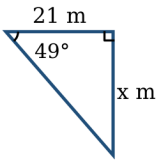


2 $s = ut + \frac{1}{2}at^2$

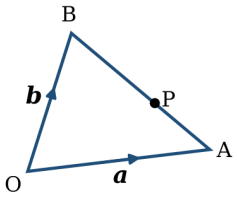
Work out the value of s when u = 1, a = 6 and t = 5

3 A television costs £120 plus VAT at 20%.
In a sale, the price including VAT is reduced by 25%.
Work out the sale price of the television.

4 Work out the value of x. (Calculator)
Give your answer to 3 significant figures.
The diagram is not drawn accurately.



5 A swimming pool holds 24 m^3 of water.
How many litres is this?

Day 94	A Tier 10-a-day
6 Tom has £450. Tom spends $\frac{1}{3}$ of the money on a phone case and $\frac{1}{3}$ of the money that is left on headphones. How much money does Tom have left?	
7 Expand and simplify $(x - 1)(x - 4)(x + 1)$	
8 OAB is a triangle. $\overrightarrow{OA} = \mathbf{a}$ and $\overrightarrow{OB} = \mathbf{b}$. P is the point on AB such that AP : PB = 2 : 3. Find $\overrightarrow{OP}$ in terms of **a** and **b**. 	
9 The value of a car falls by 20% each year. (Calculator) After 3 years it is worth £3,328. Work out its value at the start.	
10 y is inversely proportional to x. When x = 1, y = 16. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 4.	