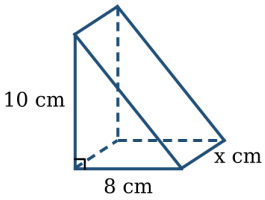
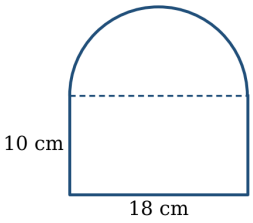
Day 168	A Tier 10-a-day
1 The sum of 5 consecutive whole numbers is 155. Work out the largest of the numbers.	
2 PQ is a straight line. A point S moves so that it is always 5 cm from the line PQ, on one side of it. Describe the locus of S.	
3 A piece of wood has a mass of 156 g. The density of the material is 1.2 g/cm^3. Work out the volume of the piece of wood.	
4 (a) Simplify $\sqrt{150}$ (b) Simplify $\sqrt{150} - \sqrt{24}$	
5 The diagram shows a prism with a right-angled triangle as its cross-section. The volume of the prism is 160 cm^3. Work out the value of x. The diagram is not drawn accurately. 	

Day 168 **A Tier 10-a-day**

6 A straight line passes through the points (2, 5) and (5, −4).
Find the equation of the line.

7 The diagram shows a shape made from a rectangle and a semicircle.
Work out the area of the shape.
Give your answer in terms of π.
The diagram is not drawn accurately.



8 Solve the simultaneous equations
$x^2 + y^2 = 289$
$y = -x + 23$

9 Owen invests £2000 in a savings account. (Calculator)
The account pays compound interest at a fixed rate each year.
After 2 years there is £2080.80 in the account.
Work out the annual rate of interest.

10 Work out $(4\frac{1}{2} - 2\frac{1}{6}) \times 2\frac{2}{3}$
Give your answer as a mixed number in its simplest form.