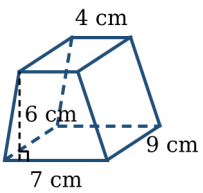
Day 271	A Tier 10-a-day
1 (a) Write 3868.3 correct to 3 significant figures. (b) Write 6.3909 correct to 2 decimal places.	
2 f(x) = 3x + 7 g(x) = $x^2 - 2$ Solve fg(x) = 49	
3 The number of members of a gym is increased by 5%. The new number is then decreased by 5%. Work out the overall percentage change.	
4 y is directly proportional to the cube of x. When x = 2, y = 64. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 5.	
5 The diagram shows a prism. The cross-section of the prism is a trapezium. Work out the volume of the prism. The diagram is not drawn accurately.  	

Day 271 **A Tier 10-a-day**

6 $f(x) = 3x - 8$

(a) Find $f^{-1}(x)$

(b) Work out $f^{-1}(-2)$

7 (a) Show that $0.\dot{1}\dot{6} = \frac{16}{99}$

(b) Hence write $3.\dot{1}\dot{6}$ as a mixed number in its simplest form.

8 A solid hemisphere has radius 10 cm.
Work out the total surface area of the hemisphere.
Give your answer in terms of π.

9 Work out $(3.75 \times 10^4) - (3.6 \times 10^3)$
Give your answer in standard form.

10 The histogram shows information about the length of some items.

(a) Work out the number of items with a length in the class 10 to 30 mm.

(b) Work out an estimate for the number with a length greater than 35 mm.

