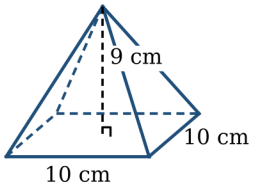
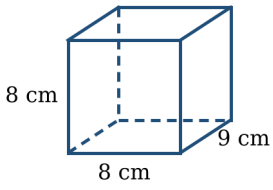
Day 147	A Tier 10-a-day
1 Convert 0.08 m^3 into cm^3.	
2 The number of members of a club was 340 and is now 476. Work out the percentage increase.	
3 The diagram shows a pyramid with a square base of side 10 cm. The perpendicular height of the pyramid is 9 cm. Work out the volume of the pyramid. The diagram is not drawn accurately. 	
4 (a) Solve $-11 < 2x - 3 < -1$ (b) Write down all the integer values of x that satisfy this inequality.	
5 The diagram shows a prism. The cross-section of the prism is a rectangle. Work out the volume of the prism. The diagram is not drawn accurately. 	

Day 147 **A Tier 10-a-day**

6 The table shows the heights, in cm, of 25 plants.
(a) Write down the class that contains the median.
(b) Work out an estimate for the mean.

Height, h (cm)	Frequency
$10 < h \leq 30$	2
$30 < h \leq 50$	13
$50 < h \leq 70$	3
$70 < h \leq 90$	4
$90 < h \leq 110$	3

7 Solve $x^2 \leq 4$

8 The mean of 9 numbers is 44.
Another number is added. The mean of the 10 numbers is now 46.9.
Work out the number that was added.

9 Hugo invests £1000 in a savings account. (Calculator)
The account pays compound interest at a fixed rate each year.
After 2 years there is £1060.90 in the account.
Work out the annual rate of interest.

10 Rationalise the denominator of $\frac{7}{3-\sqrt{2}}$

Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.