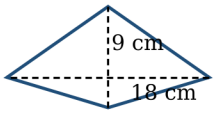
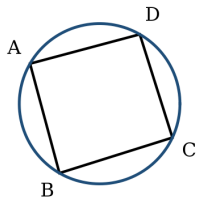
Day 287	A Tier 10-a-day
1 The diagram shows a kite. The diagonals are 18 cm and 9 cm and cross at right angles. Work out the area of the kite. The diagram is not drawn accurately.  	
2 Here are the first four terms of a sequence. 8, 15, 22, 29 (a) Find an expression for the nth term. (b) Is 177 a term of this sequence? You must show your working.	
3 A rectangular table top is 180 cm by 80 cm. Work out its area in m^2.	
4 y is inversely proportional to the square of x. When x = 2, y = 12. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 4.	
5 A house is worth £250000. (Calculator) Its value increases by 20% each year. Work out its value after 3 years., to the nearest pound.	

Day 287 **A Tier 10-a-day**

6 Solve $5^{2x+1} = 125$

7 A, B, C and D are points on a circle.
Angle A = (2x + 20)° and angle C = (3x − 35)°.
(a) Work out the value of x.
(b) Work out the size of angle A.
The diagram is not drawn accurately.



8 Rationalise the denominator of $\frac{7}{\sqrt{7}}$
Give your answer in its simplest form.

9 Here are four fractions: $\frac{3}{8}$ $\frac{6}{9}$ $\frac{7}{8}$ $\frac{18}{40}$
Which one of these fractions is equal to a recurring decimal?

10 The table shows the probabilities of the outcomes of a biased four-sided dice.
(a) Work out the value of x.
(b) The four-sided dice is rolled 300 times.
Estimate the number of times it lands on 3.

Score	1	2	3	4
Probability	0.2	x	x	0.3