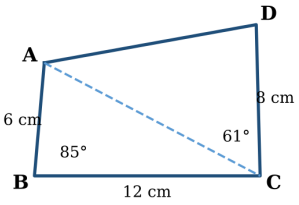
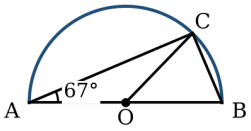
Day 175 **IGCSE 10-a-day**

1 In quadrilateral ABCD, AB = 6 cm, BC = 12 cm, CD = 8 cm,
angle ABC = 85° and angle ACD = 61°.
Work out the area of ABCD. Give your answer correct to 3 significant figures. (Calculator)



2 Work out the value of $\frac{2x - y}{z}$
when $x = -1$, $y = -1$ and $z = -2$.

3 AB is a diameter of a circle, centre O. C is a point on the circle. Angle BAC = 67°.
(a) Work out the size of angle ACB.
(b) Work out the size of angle COB.
The diagram is not drawn accurately.



4 The positive numbers x and y satisfy x + y = 6.
Find the greatest possible value of x^2y, showing that it is the greatest.

5 Here are the first five terms of a quadratic sequence.
16, 35, 64, 103, 152
Find an expression for the nth term.

Day 175	IGCSE 10-a-day
6 $f(x) = x^{\frac{3}{2}} - 12x$ for $x > 0$ (a) Find the range of values of x for which f is a decreasing function. (b) Find the least value of f(x).	
7 Given that $x > 0$, solve $x^{\frac{3}{2}} = 27$	
8 $y = 2x^4 - 36x^2 + 8$ Find the coordinates of the stationary points of the curve and determine the nature of each.	
9 The price of a tablet is increased by 5%. Later the new price is reduced by 20% in a sale. The sale price is £218.40. Work out the price before the increase. (Calculator)	
10 A circle has centre C(5, −5) and passes through the point P(6, 1). Find an equation of the circle.	