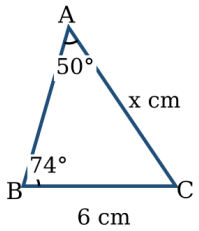
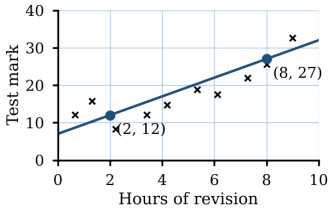
Day 245	IGCSE 10-a-day
1 The diagram shows triangle ABC. (Calculator) Work out the length of AC. Give your answer correct to 1 decimal place. The diagram is not drawn accurately.  	
2 Solve $-4x + 4 \leq 5x - 18$	
3 The function $f(x) = -3x^2 + 5$ is decreasing when $x > k$. Find the value of k.	
4 R is the region that satisfies all of these inequalities: $y \leq 3x$ $x + y < 10$ $x > 0$ Which of these points lie in R? A(0, 1) B(4, 10) C(5, 3) D(8, 4) E(8, 7)	
5 $y = -2x^4 + 8x$ Find the coordinates of the stationary point and determine its nature.	

Day 245 **IGCSE 10-a-day**

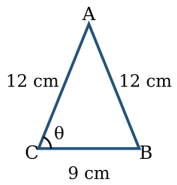
6 Without using a calculator, work out $0.\dot{5} - 0.\dot{0}\dot{5}$
Give your answer as a fraction in its simplest form.

7 $f(x) = 2x^3 - 24x + 2$
Find the y coordinate of the local maximum point and the y coordinate of the local minimum point.

8 The scatter graph shows hours of revision (x) and test mark (y).
The equation of the line of best fit is $y = 2.5x + 7$.
(a) Estimate y when x = 7.
(b) Explain why an estimate of y when x = 25 may be unreliable.



9 The diagram shows triangle ABC. (Calculator)
(a) Work out angle ACB, marked θ, to 1 decimal place.
(b) Work out the area of triangle ABC to 3 significant figures.
The diagram is not drawn accurately.



10 The line $y = 2x + k$ is a tangent to the circle $x^2 + y^2 = 17$.
Find the possible values of k.
Give any surds in their simplest form.