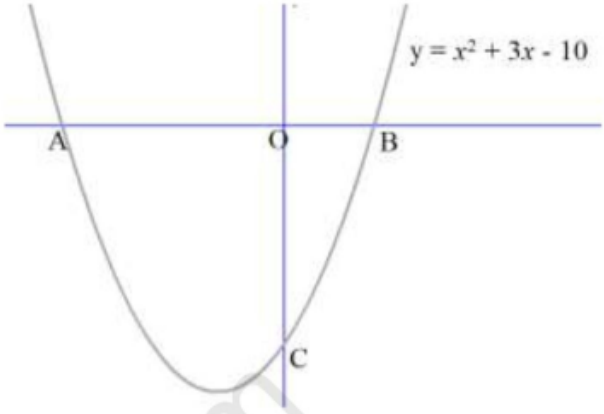
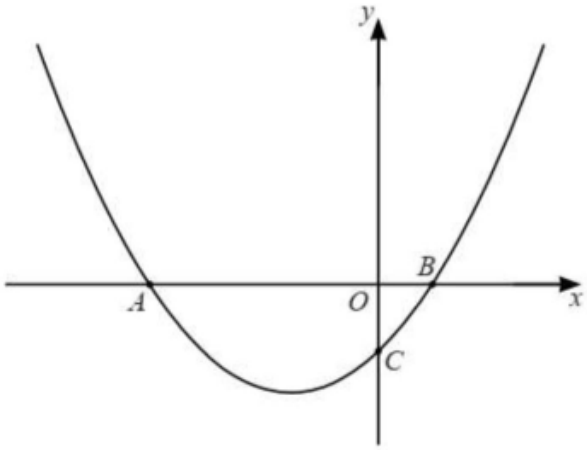
Worksheet P2 **Finding x and y intercepts of quadratic curve** **Mathematics 0580**

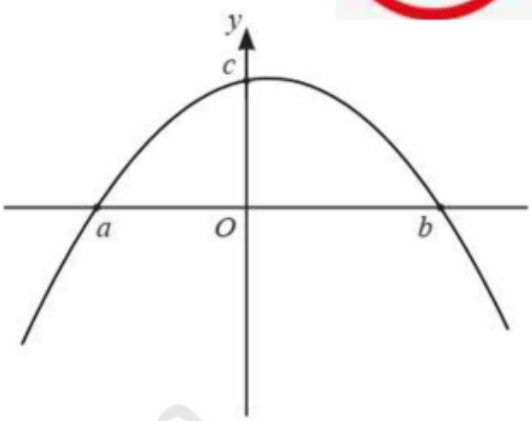
1. In the figure the curve $y = x^2 + 3x - 10$ cuts the x axis at two points A and B, and y axis at point C.
   (a) Find the coordinates of A and B. [3]
   (b) Find the coordinates of C. [1]



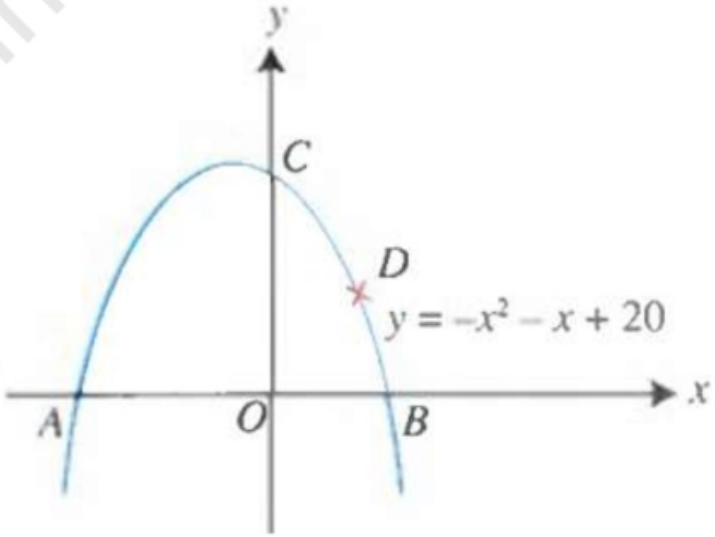
2. The diagram shows a sketch of the curve with equation $y = x^2 + 3x - 4$
   Find the coordinates of the points A, B and C. [4]



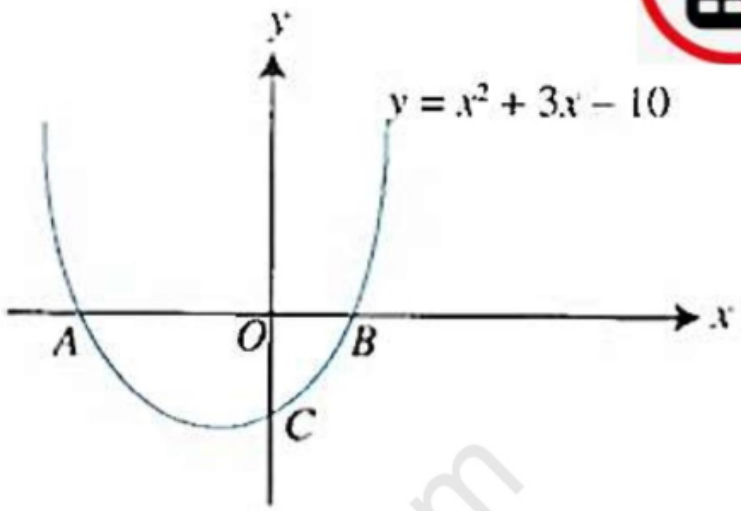
3. (i) Factorise $24 + 5x - x^2$ [2]
   (ii) The diagram shows a sketch of $y = 24 + 5x - x^2$
   Work out the values of a, b and c. [3]



4. The figure shows the curve $y = -x^2 - x + 20$.
   (i) The curve cuts the x-axis at two points A and B, and the y-axis at the point C.
   Find the coordinates of A, B and C.
   (ii) The point $D(3, h)$ lies on the curve. Find the value of h.



5. In the figure, the curve $y = x^2 + 3x - 10$ cuts the x-axis at two points A and B, and the y-axis at the point C. Calculate the coordinates of A, B and C.



Answers

1) (a) A(-5,0) B(2,0) (b)C(0, -10)
2) A(–4, 0) B(1, 0) C(0, –4)
3) (i)$(8 - x)(3 + x)$ (ii)a = -3 b = 8 c = 24
4) (i) A(-5,0) , B(4,0) , C(0,20) (ii)8
5) A(-5,0) B(2,0) C(0,-10)