



crash**MATHS**

C1 PAPERS
PRACTICE PAPER B



crashmathsworksheets

75 MARKS / 1 HOUR 45 MINUTES

1 A line A has equation $2y - 4x = -5$.

(a) State the gradient of the line A .

(1)

Another line B is perpendicular to the line A and passes through the point $(-2, 4)$.

(b) Work out the equation of the line B .

(3)

A line C has gradient 4 and passes through the point P .

Given that P is the point where the line A and the line B intersect,

(c) Work out the equation of the line C .

(4)



2 Express

$$\frac{x}{2\sqrt[4]{y}} \sqrt{\frac{2x^2y}{5\sqrt{y}}}$$

in the form ax^p , where a and p are constants to be found.

(3)



- 3 Given the equation $ax^2 + bx + c = 0$, by completing the square, or otherwise,
(a) Show that

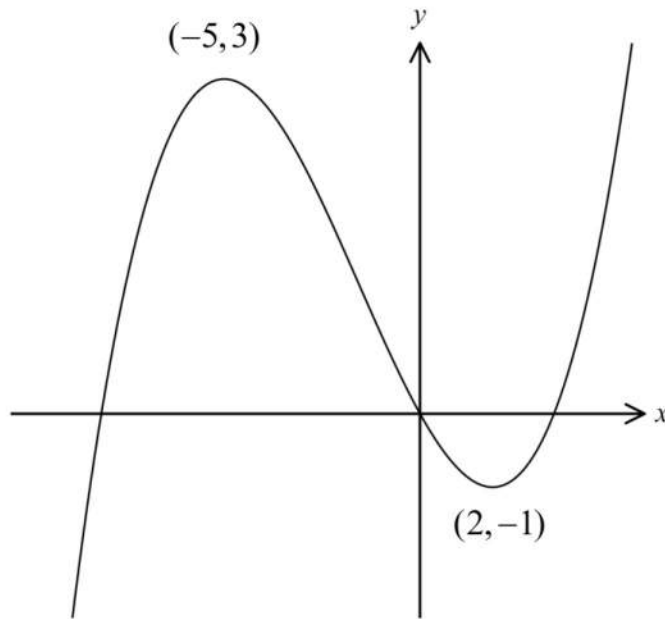
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (5)$$

- (b) Hence, or otherwise, find, as surds, the roots of the equation

$$2(x+1)(x-4) - (x-2)^2 = 0 \quad (4)$$



- 4 The diagram below shows a sketch of the curve $y = f(x)$.



On separate diagrams, sketch the curve with equation

- (i) $y = f(x - 3)$
(ii) $y = f(x) - k$

On each sketch you should indicate clearly the coordinates of the maximum and minimum point.

(5)



10 An arithmetic sequence a_i has first three terms

$$a_1 = 2x + 1$$

$$a_2 = x - 6$$

$$a_3 = x$$

where x is a constant.

Find $\sum_{i=1}^5 a_i$.

(6)



