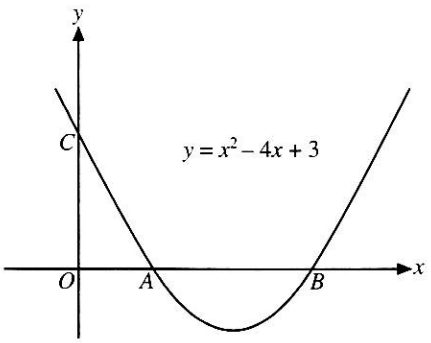
5.



The diagram shows the graph of $y = x^2 - 4x + 3$. Find the coordinates of

(a) the points A, B and C,

(b) the minimum point of the graph.

6. The equation of a graph is $y = (x + 3)^2 + k$, where k is a constant. The minimum point A of the graph is on the x-axis and the graph cuts the y-axis at the point C.

(a) Find the value of k.

(b) Find the coordinates of the points A and C.

(c) Sketch the graph.

(d) If a horizontal line through C cuts the graph again at the point D, find the coordinates of D.

7. The equation of a quadratic graph is $y = -(x + 2)^2 + 4$.

(a) Find the turning point D of the graph.

(b) State whether D is a maximum point or a minimum point.

(c) Find the coordinates of the points at which the graph cuts the x-axis.

(d) Sketch the graph of $y = -(x + 2)^2 + 4$.

8. Copy the given axes and draw the following graphs on your diagram for $-2 \leqslant x \leqslant 2$.

(a) $y = \frac{2}{x^2}$

(b) $y = 2^x$