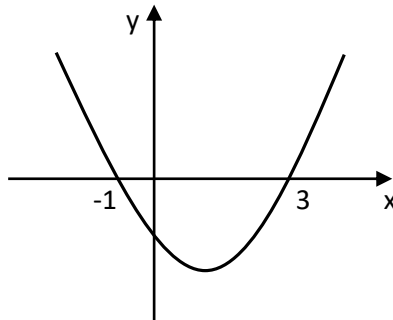
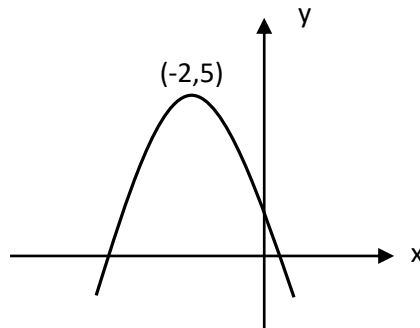


1. The graph with equation $y = (x - a)(x - b)$ is shown below.



- Find the values of a and b .
 - Find the coordinates of the turning point.
 - Write down the equation of the axis of symmetry.
- Sketch the graph of the function $f(x) = (x - 3)^2 - 4$, indicating clearly the coordinates of the turning point and the y -intercept.
 - Sketch the graph of the function with equation $y = x^2 + 4x - 1$.
 - Factorise $x^2 + 3x - 10$ and hence, sketch the graph of the equation $y = x^2 + 3x - 10$.
 - Write down the equation of the graph shown below and find the point at which the graph cuts the y -axis.



- Write the quadratic equation $y = x^2 + 6x - 3$ in the form $(x + a)^2 + b$.
 - Hence, sketch an annotated graph of $y = x^2 + 6x - 3$, showing the y -intercept.
- Find the roots of the quadratic equation $y = x^2 + 4x - 12$.
 - Sketch the graph of the quadratic equation $y = x^2 + 5x - 24$, indicating clearly the roots.
 - Write down the equation of its axis of symmetry.
 - A graph has equation $y = 12 - (x + 5)^2$. Write down the coordinates of the turning point.
 - Write down the equation of its axis of symmetry.
 - Sketch the graph with equation $y = x^2 - 2x - 9$ indicating clearly the turning point and y -intercept.