

x	$-\infty$ $\frac{-b}{2a}$ $+\infty$
$f(x) =$ $ax^2 + bx + c$	<p>Diagram illustrating the function $f(x) = ax^2 + bx + c$ and its vertex. The x-axis is marked with $-\infty$, $\frac{-b}{2a}$, and $+\infty$. The function is shown as a parabola opening upwards, with its vertex at $x = \frac{-b}{2a}$. Arrows indicate the mapping from the x-axis labels to the vertex label $f(\frac{-b}{2a})$.</p>