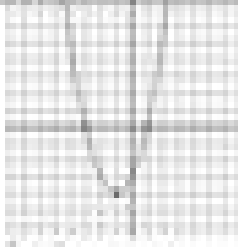
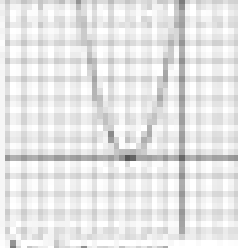
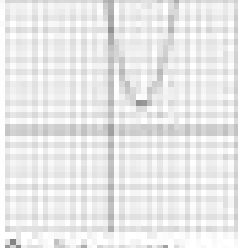


Using the Discriminant

The discriminant of a quadratic equation $ax^2 + bx + c = 0$, is $b^2 - 4ac$. The discriminant is found inside the square root of the quadratic formula. The discriminant tells us the number and nature of the roots of the quadratic.

If the discriminant is:	Number and Nature	number of x-intercepts of the graph of the related function
Positive	two real roots	 <p>2 x-intercepts</p>
Zero	one real root (a double root)	 <p>1 x-intercept</p>
Negative	two imaginary roots; no real roots	 <p>0 x-intercepts</p>