Lesson Summary

You can use the sign of the discriminant, $b^2 - 4ac$, to determine the number of real solutions to a quadratic equation in the form $ax^2 + bx + c = 0$, where $a \neq 0$. If the equation has a positive discriminant, there are two real solutions. A negative discriminant yields no real solutions and a discriminant equal to zero yields only one real solution.

Problem Set

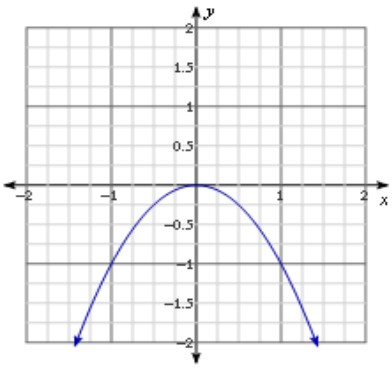
Without solving, determine the number of real solutions for each quadratic equation.

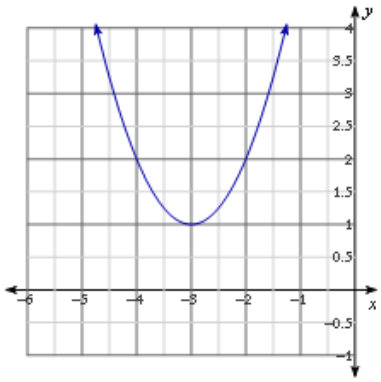
1. $b^2 - 4b + 3 = 0$

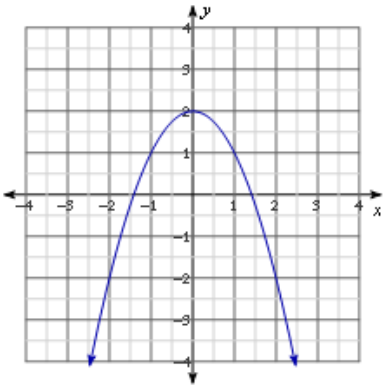
2. $2n^2 + 7 = -4n + 5$

3. $x - 3x^2 = 5 + 2x - x^2$

4. $4q + 7 = q^2 - 5q + 1$

5. 

6. 

7. 

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