Lesson Summary

The quadratic formula, $x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$, is derived by completing the square on the general form of a quadratic equation: $ax^2 + bx + c = 0$, where $a \neq 0$. The formula can be used to solve any quadratic equation, and is especially useful for those that are not easily solved using any other method (i.e., factoring or completing the square).

Problem Set

Use the quadratic formula to solve each equation.

1. Solve for z: $z^2 - 3z - 8 = 0$.

2. Solve for q: $2q^2 - 8 = 3q$

3. Solve for m: $\frac{1}{3}m^2 + 2m + 8 = 5$.