Algebra 2        Name_____

# Solving Quadratics with Imaginary Solutions

Date_____ Period_____

**Solve each equation with the quadratic formula.**

1) $10x^2 - 4x + 10 = 0$

2) $x^2 - 6x + 12 = 0$

3) $5x^2 - 2x + 5 = 0$

4) $4b^2 - 3b + 2 = 0$

5) $7x^2 + 2x + 8 = 0$

6) $6p^2 - 8p + 6 = 0$

7) $9x^2 - 4x + 2 = 0$

8) $12v^2 - 6v + 10 = 0$

9) $5m^2 - 4m + 6 = 0$

10) $6m^2 + 3m + 2 = 0$

# Answers to Solving Quadratics with Imaginary Solutions

1) $\left\{ \dfrac{1 + 2i\sqrt{6}}{5}, \dfrac{1 - 2i\sqrt{6}}{5} \right\}$

2) $\left\{ 3 + i\sqrt{3}, 3 - i\sqrt{3} \right\}$

3) $\left\{ \dfrac{1 + 2i\sqrt{6}}{5}, \dfrac{1 - 2i\sqrt{6}}{5} \right\}$

4) $\left\{ \dfrac{3 + i\sqrt{23}}{8}, \dfrac{3 - i\sqrt{23}}{8} \right\}$

5) $\left\{ \dfrac{-1 + i\sqrt{55}}{7}, \dfrac{-1 - i\sqrt{55}}{7} \right\}$

6) $\left\{ \dfrac{2 + i\sqrt{5}}{3}, \dfrac{2 - i\sqrt{5}}{3} \right\}$

7) $\left\{ \dfrac{2 + i\sqrt{14}}{9}, \dfrac{2 - i\sqrt{14}}{9} \right\}$

8) $\left\{ \dfrac{3 + i\sqrt{111}}{12}, \dfrac{3 - i\sqrt{111}}{12} \right\}$

9) $\left\{ \dfrac{2 + i\sqrt{26}}{5}, \dfrac{2 - i\sqrt{26}}{5} \right\}$

10) $\left\{ \dfrac{-3 + i\sqrt{39}}{12}, \dfrac{-3 - i\sqrt{39}}{12} \right\}$