

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

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

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

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

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

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

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

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

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

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

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