

Name : _____

Score : _____ Date : _____

Solving Quadratic Equations With Complex Solutions

Solve each equation with the quadratic formula.

1) $12p^2 - 6p + 10 = 0$

2) $q^2 - 5q + 10 = 0$

3) $-5x^2 + 12x - 8 = 0$

4) $b^2 + 4b + 5 = 0$

5) $3d^2 - 5d + 6 = 0$

6) $5l^2 + 8l + 4 = 0$

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Answers

1) $12p^2 - 6p + 10 = 0$

2) $q^2 - 5q + 10 = 0$

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

$$\underline{\left\{ \frac{5 + i\sqrt{15}}{2}, \frac{5 - i\sqrt{15}}{2} \right\}}$$

3) $-5x^2 + 12x - 8 = 0$

4) $b^2 + 4b + 5 = 0$

$$\underline{\left\{ \frac{6 + 2i}{5}, \frac{6 - 2i}{5} \right\}}$$

$$\underline{\{-2 + i, -2 - i\}}$$

5) $3d^2 - 5d + 6 = 0$

6) $5l^2 + 8l + 4 = 0$

$$\underline{\left\{ \frac{5 + i\sqrt{47}}{6}, \frac{5 - i\sqrt{47}}{6} \right\}}$$

$$\underline{\left\{ \frac{-4 + 2i}{5}, \frac{-4 - 2i}{5} \right\}}$$