

Solve each equation with the quadratic formula.

1) $4p^2 - 4p - 99 = 0$

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

3) $x^2 - 10x - 4 = -11$

4) $3x^2 - 110 = 7x$

5) $7r^2 + 4r = -4$

6) $a^2 + 14a + 6 = 2a$

7) $x^2 - 2x = -8x - 3x^2 + 88$

8) $11a^2 + 6a + 5 = 4a + 3a^2$

Simplify.

$$9) (2 - 8i) - (-2 - 7i)$$

$$10) (4 + 3i) - (-2 + 8i)$$

$$11) (8 - 8i) - (-5 - 6i) - (6 + 3i)$$

$$12) (3 - 7i) + (1 + 3i) + (-1 - 4i)$$

$$13) 4(5 + 6i)$$

$$14) (-2i)^2$$

$$15) (5 + 3i)(3 + 8i)$$

$$16) (5 - 2i)^2$$

$$17) (-i)(-8 + 8i)(6 + 3i)$$

Solve each equation with the quadratic formula.

1) $4p^2 - 4p - 99 = 0$

$$\left\{ \frac{11}{2}, -\frac{9}{2} \right\}$$

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

$$\left\{ \frac{-1 + i\sqrt{15}}{8}, \frac{-1 - i\sqrt{15}}{8} \right\}$$

3) $x^2 - 10x - 4 = -11$

$$\{5 + 3\sqrt{2}, 5 - 3\sqrt{2}\}$$

4) $3x^2 - 110 = 7x$

$$\left\{ \frac{22}{3}, -5 \right\}$$

5) $7r^2 + 4r = -4$

$$\left\{ \frac{-2 + 2i\sqrt{6}}{7}, \frac{-2 - 2i\sqrt{6}}{7} \right\}$$

6) $a^2 + 14a + 6 = 2a$

$$\{-6 + \sqrt{30}, -6 - \sqrt{30}\}$$

7) $x^2 - 2x = -8x - 3x^2 + 88$

$$\left\{ 4, -\frac{11}{2} \right\}$$

8) $11a^2 + 6a + 5 = 4a + 3a^2$

$$\left\{ \frac{-1 + i\sqrt{39}}{8}, \frac{-1 - i\sqrt{39}}{8} \right\}$$

Simplify.

$$9) (2 - 8i) - (-2 - 7i)$$

$$4 - i$$

$$10) (4 + 3i) - (-2 + 8i)$$

$$6 - 5i$$

$$11) (8 - 8i) - (-5 - 6i) - (6 + 3i)$$

$$7 - 5i$$

$$12) (3 - 7i) + (1 + 3i) + (-1 - 4i)$$

$$3 - 8i$$

$$13) 4(5 + 6i)$$

$$20 + 24i$$

$$14) (-2i)^2$$

$$-4$$

$$15) (5 + 3i)(3 + 8i)$$

$$-9 + 49i$$

$$16) (5 - 2i)^2$$

$$21 - 20i$$

$$17) (-i)(-8 + 8i)(6 + 3i)$$

$$24 + 72i$$

Solve each equation with the quadratic formula.

1) $x^2 - 3x - 40 = 0$

2) $3x^2 + 2x + 11 = 0$

3) $4m^2 + 3m - 15 = 4$

4) $5x^2 + 9x = -4$

5) $2v^2 + 2v = -2$

6) $2b^2 + 4b - 29 = -9 - 4b$

7) $p^2 + 4 = -5p$

8) $8x^2 - 10x + 17 = 6$

Simplify.

$$9) (-7 - 3i) + (8 - 7i)$$

$$10) (2 - i) - (-8 + 3i)$$

$$11) (-5 + 5i) - (8i) - (1 - 3i)$$

$$12) (3 + 6i) + (-4 - 6i) + (-5 - 5i)$$

$$13) (-3i)^2$$

$$14) (7i)(5i)$$

$$15) (-7 + 6i)(6 + 6i)$$

$$16) (-3i)(4i)(6 - 2i)$$

$$17) (5 + 8i)(7 + 3i)(-8 + 7i)$$

Solve each equation with the quadratic formula.

1) $x^2 - 3x - 40 = 0$

$\{8, -5\}$

2) $3x^2 + 2x + 11 = 0$

$\left\{ \frac{-1 + 4i\sqrt{2}}{3}, \frac{-1 - 4i\sqrt{2}}{3} \right\}$

3) $4m^2 + 3m - 15 = 4$

$\left\{ \frac{-3 + \sqrt{313}}{8}, \frac{-3 - \sqrt{313}}{8} \right\}$

4) $5x^2 + 9x = -4$

$\left\{ -\frac{4}{5}, -1 \right\}$

5) $2v^2 + 2v = -2$

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

6) $2b^2 + 4b - 29 = -9 - 4b$

$\{-2 + \sqrt{14}, -2 - \sqrt{14}\}$

7) $p^2 + 4 = -5p$

$\{-1, -4\}$

8) $8x^2 - 10x + 17 = 6$

$\left\{ \frac{5 + 3i\sqrt{7}}{8}, \frac{5 - 3i\sqrt{7}}{8} \right\}$

Simplify.

$$9) (-7 - 3i) + (8 - 7i)$$

$$1 - 10i$$

$$10) (2 - i) - (-8 + 3i)$$

$$10 - 4i$$

$$11) (-5 + 5i) - (8i) - (1 - 3i)$$

$$-6$$

$$12) (3 + 6i) + (-4 - 6i) + (-5 - 5i)$$

$$-6 - 5i$$

$$13) (-3i)^2$$

$$-9$$

$$14) (7i)(5i)$$

$$-35$$

$$15) (-7 + 6i)(6 + 6i)$$

$$-78 - 6i$$

$$16) (-3i)(4i)(6 - 2i)$$

$$72 - 24i$$

$$17) (5 + 8i)(7 + 3i)(-8 + 7i)$$

$$-585 - 491i$$