

# Solving Quadratic Equations with the Quadratic Formula

## Chapter 8 Sec 2

1. Solve  $5x^2 + 10x + 3 = x + 1$ .

a.  $\frac{-9 \pm \sqrt{41}}{10}$

b.  $\frac{-9 \pm \sqrt{43}}{10}$

c.  $\frac{-9 \pm \sqrt{47}}{10}$

d.  $\frac{-9 \pm \sqrt{51}}{10}$

2. Solve  $3x^2 + 10x + 3 = 2x + 1$ .

a.  $\frac{-8 \pm \sqrt{10}}{3}$

b.  $\frac{-4 \pm 2\sqrt{10}}{3}$

c.  $\frac{-4 \pm \sqrt{10}}{3}$

d.  $\frac{-8 \pm \sqrt{5}}{3}$

e.  $\frac{-4 \pm \sqrt{5}}{3}$

3. Solve  $3x^2 + 4x + 7 = 3x + 5$ . Use complex numbers as needed.

a.  $\frac{-5 \pm i\sqrt{10}}{6}$

b.  $\frac{-5 \pm i\sqrt{11}}{6}$

c.  $\frac{-5 \pm i\sqrt{13}}{6}$

d.  $\frac{-5 \pm i\sqrt{14}}{6}$

4. Solve  $3x^2 + 3x + 5 = -x + 3$ . Use complex numbers as needed.

a.  $\frac{-4 \pm 4i}{3}$

b.  $\frac{-2 \pm 2i\sqrt{2}}{3}$

c.  $\frac{-2 \pm 4i\sqrt{2}}{3}$

d.  $\frac{-2 \pm i\sqrt{2}}{3}$

5. Solve  $(x-2)(x-3) = 10$ .

a. 2

b. 3

c. 2, 3

d.  $\frac{5 \pm \sqrt{37}}{2}$

ae.  $\frac{5 \pm \sqrt{39}}{2}$

be.  $\frac{5 \pm \sqrt{41}}{2}$

ce.  $\frac{5 \pm \sqrt{43}}{2}$

de.  $\frac{5 \pm \sqrt{47}}{2}$

**Answers:**

1. a

2. c

3. b

4. d

5. be