

Solving: *Quadratic Equations by Quadratic Formula* $ax^2 + bx + c = 0$

Solve the equation. (Hint: Don't forget to reduce your answer when possible.)

1. $x^2 + 3x - 2 = 0$

6. $x^2 + 2x + 3 = 0$

2. $2x^2 - 5x = 12$

7. $p^2 - 3p - 32 = 8$

3. $3m^2 - 2m - 3 = 0$

8. $2x^2 + 3x + 1 = 0$

4. $3y^2 + 6y + 3 = 0$

9. $x^2 - 5x = -3$

5. $x^2 - 6x + 1 = -2$

10. $3x^2 + 10x - 2 = 0$

ANSWERS:

1. $x = \frac{-3 - \sqrt{17}}{2}, \frac{-3 + \sqrt{17}}{2}$

4. $y = -1$

7. $p = -5, 8$

9. $x = \frac{5 - \sqrt{13}}{2}, \frac{5 + \sqrt{13}}{2}$

2. $x = -1\frac{1}{2}, 4$

5. $x = 3 - \sqrt{6}, 3 + \sqrt{6}$

8. $x = -1, -\frac{1}{2}$

10. $x = \frac{-5 - \sqrt{31}}{3}, \frac{-5 + \sqrt{31}}{3}$

3. $m = \frac{1 - \sqrt{10}}{3}, \frac{1 + \sqrt{10}}{3}$

6. No Real Solution
or
 $x = -1 \pm \sqrt{2}i$