

4-5 Solving Quadratic Equations by Factoring or Taking Square Roots Notes

❖ Methods for Solving Quadratics

- Taking Square Roots
 - No Linear Term ($x^2 - 49 = 0$)
 - Isolate the variable.
 - Don't forget the plus or minus.
- Factoring
 - Set the equation equal to zero.
 - Factor completely.
 - Set each multiple equal to zero.
 - Solve.
- Completing the Square
- Quadratic Formula
- Graphing

❖ Examples

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

- $x^2 = -4x$

- $5x^2 - 80 = 0$

- The length of a rectangular swimming pool is 3 meters longer than its width. A sidewalk that is 3 meters wide is added around the edge of the pool. If the area of the swimming pool and sidewalk is 154 m^2 , what is the area of the swimming pool?