Solving Quadratic Equations by Taking Square Roots - Answers

Problems. Solve each of the following quadratic equations by taking square roots.

1. $x^2 - 25 = 0$

   $x^2 = 25$

   $\sqrt{x^2} = \sqrt{25}$

   $x = 5, x = -5$

2. $2x^2 - 50 = 0$

   $2x^2 = 50$

   $x^2 = 25$

   $\sqrt{x^2} = \sqrt{25}$

   $x = 5, x = -5$

3. $y^2 + 7 = 16$

   $y^2 = 9$

   $\sqrt{y^2} = \sqrt{9}$

   $y = 3, y = -3$

4. $4y^2 - 5 = 139$

   $4y^2 = 144$

   $y^2 = 36$

   $\sqrt{y^2} = \sqrt{36}$

   $y = 6, y = -6$

5. $z^2 + 7 = 3$

   $z^2 = -4$

   $\sqrt{z^2} = \sqrt{-4}$

   No solution

6. $8 - 2y^2 = 0$

   $-2y^2 = -8$

   $y^2 = 4$

   $\sqrt{y^2} = \sqrt{4}$

   $y = 2, y = -2$