

Name:

Period:

Date:

**Solving Radical Equations**

**Solve each equation. Check your answers for extraneous solutions.**

1.  $(2x + 1)^{1/2} - 2 = 2$

2.  $\sqrt{x^2 - 9} + 3 = 7$

3.  $(x - 2)^{1/3} - 3 = -5$

4.  $10 - 3\sqrt[3]{2x+5} = -11$

5.  $(x^2 - x - 22)^{4/3} = 16$

6.  $3(x - 5)^{3/2} - 6 = 18$

7.  $\sqrt{2x-6} = \sqrt{5x-15}$

8.  $\sqrt[3]{6x-5} - \sqrt[3]{3x+2} = 0$

**9.**  $\sqrt{3x+7} = x+1$

**10.**  $\sqrt{x+3} = \sqrt{x+4}$

**11.**  $\sqrt{x+3} = 1 + \sqrt{x+1}$

**12.**  $\sqrt{x+8} = \sqrt{x} + \sqrt{3}$