

## 6-7 Skills Practice

### Solving Radical Equations and Inequalities

Solve each equation.

1.  $\sqrt{x} = 5$

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

3.  $5\sqrt{j} = 1$

4.  $v^{\frac{1}{2}} + 1 = 0$

5.  $18 - 3y^{\frac{1}{2}} = 25$

6.  $\sqrt[3]{2w} = 4$

7.  $\sqrt{b-5} = 4$

8.  $\sqrt{3n+1} = 5$

9.  $\sqrt[3]{3r-6} = 3$

10.  $2 + \sqrt{3p+7} = 6$

11.  $\sqrt{k-4} - 1 = 5$

12.  $(2d+3)^{\frac{1}{3}} = 2$

13.  $(t-3)^{\frac{1}{3}} = 2$

14.  $4 - (1-7u)^{\frac{1}{3}} = 0$

15.  $\sqrt{3z-2} = \sqrt{z-4}$

16.  $\sqrt{g+1} = \sqrt{2g-7}$

Solve each inequality.

17.  $4\sqrt{x+1} \geq 12$

18.  $5 + \sqrt{c-3} \leq 6$

19.  $-2 + \sqrt{3x+3} < 7$

20.  $-\sqrt{2a+4} \geq -6$

21.  $2\sqrt{4r-3} > 10$

22.  $4 - \sqrt{3x+1} > 3$

23.  $\sqrt{y+4} - 3 \geq 3$

24.  $-3\sqrt{11r+3} \geq -15$