

5-8

Skills Practice

Radical Equations and Inequalities

Solve each equation or inequality.

1. $\sqrt{x} = 5$

25

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

 $\frac{1}{25}$

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

 \emptyset

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

21

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

11

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

40

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

11

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

 \emptyset

17. $\sqrt{x-1} = 4\sqrt{x+1}$

 \emptyset

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

 $-1 \leq x \leq 26$

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

 $r > 7$

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

 $y \geq 32$

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

16

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

 \emptyset

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

32

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

8

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

3

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

 $\frac{5}{2}$

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

-9

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

8

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

 $3 \leq s \leq 4$

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

 $-2 \leq a \leq 16$

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

 $-\frac{1}{3} \leq x < 0$

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

 $-\frac{3}{11} \leq r \leq 2$