

7-4 Skills Practice

Radical Expressions

Simplify each expression.

1. $\sqrt{28}$

2. $\sqrt{40}$

3. $\sqrt{2} \cdot \sqrt{10}$

4. $\sqrt{5} \cdot \sqrt{60}$

5. $2\sqrt{3} \cdot 3\sqrt{15}$

6. $\sqrt{16b^4}$

7. $\sqrt{81a^2d^4}$

8. $\sqrt{40x^4y^6}$

9. $\sqrt{\frac{1}{6}}$

10. $\sqrt{\frac{6}{7}} \cdot \sqrt{\frac{1}{3}}$

11. $\sqrt{\frac{12}{b^2}}$

12. $\sqrt{\frac{45}{4m^4}}$

13. $\frac{2}{4 + \sqrt{5}}$

14. $\frac{3}{2 - \sqrt{3}}$

15. $7\sqrt{7} - 2\sqrt{7}$

16. $3\sqrt{13} + 7\sqrt{13}$

17. $12\sqrt{r} - 9\sqrt{r}$

18. $9\sqrt{6a} - 11\sqrt{6a} + 4\sqrt{6a}$

19. $5\sqrt{8} + 2\sqrt{20} - \sqrt{8}$

20. $2\sqrt{13} + 4\sqrt{2} - 5\sqrt{13} + \sqrt{2}$

21. $\sqrt{2}(\sqrt{8} + \sqrt{6})$

22. $\sqrt{5}(\sqrt{10} - \sqrt{3})$

23. $(4 + \sqrt{3})(4 - \sqrt{3})$

24. $(2 - \sqrt{6})^2$

25. $(\sqrt{8} + \sqrt{2})(\sqrt{5} + \sqrt{3})$

26. $(\sqrt{6} + 4\sqrt{5})(4\sqrt{3} - \sqrt{10})$