

Practice

Simplifying Radical Expressions

Simplify. Leave in radical form and use absolute value symbols when necessary.

1. $\sqrt{20}$

2. $\sqrt{40}$

3. $\sqrt{99}$

4. $\sqrt{108}$

5. $\sqrt{420}$

6. $\sqrt{275}$

7. $\sqrt{640}$

8. $\sqrt{704}$

9. $\sqrt{1250}$

10. $\frac{\sqrt{5}}{\sqrt{3}}$

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

12. $\frac{\sqrt{6}}{\sqrt{7}}$

13. $\sqrt{\frac{1}{5}}$

14. $\sqrt{\frac{5}{32}}$

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

16. $3\sqrt{5} \cdot \sqrt{5}$

17. $\sqrt{6} \cdot 4\sqrt{24}$

18. $11\sqrt{14} \cdot 2\sqrt{7}$

19. $\sqrt{\frac{3}{4}} \cdot \sqrt{\frac{4}{5}}$

20. $\sqrt{\frac{1}{7}} \cdot \sqrt{\frac{7}{11}}$

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

22. $\sqrt{81c^5d^4}$

23. $\sqrt{124y^6w^7}$

24. $\sqrt{\frac{18}{x^3}}$

25. $\frac{3}{5 - \sqrt{2}}$

26. $\frac{5}{\sqrt{7} + \sqrt{3}}$

27. $\frac{6x}{5 + \sqrt{x}}$

28. $\frac{3\sqrt{7}}{-1 - \sqrt{27}}$



Practice

Operations with Radical Expressions

Simplify. Then use a calculator to verify your answer.

1. $6\sqrt{5} - 2\sqrt{5} + 8\sqrt{5}$

2. $\sqrt{15} + 8\sqrt{15} - 12\sqrt{15}$

3. $4\sqrt{3} + 2\sqrt{12}$

4. $8\sqrt{54} - 4\sqrt{6}$

5. $8\sqrt{32} - 4\sqrt{8}$

6. $2\sqrt{45} + 4\sqrt{20}$

7. $5\sqrt{128} + 2\sqrt{18}$

8. $3\sqrt{75} - \sqrt{243}$

9. $\sqrt{28} + \sqrt{63}$

10. $\sqrt{44} - \sqrt{11}$

11. $\sqrt{27} + \sqrt{48} + \sqrt{12}$

12. $\sqrt{72} + \sqrt{50} - \sqrt{8}$

13. $\sqrt{180} - 5\sqrt{5} + \sqrt{20}$

14. $\sqrt{40} - \sqrt{10} + \sqrt{90}$

15. $2\sqrt{32} + 3\sqrt{50} - 3\sqrt{18}$

16. $\sqrt{27} + \sqrt{18} + \sqrt{300}$

17. $\sqrt{14} - \sqrt{\frac{2}{7}}$

18. $\sqrt{50} + \sqrt{32} - \sqrt{\frac{1}{2}}$