

Exercises^(A)

Multiply. The radicand in the product should be as small as possible.

- | | | |
|--------------------------------|--|--|
| 1. $\sqrt{6} \cdot \sqrt{6}$ | 12. $\sqrt{6} \cdot \sqrt{\frac{2}{3}}$ | 23. $\sqrt{2ab} \cdot \sqrt{3ab}$ |
| 2. $\sqrt{7} \cdot \sqrt{7}$ | 13. $\sqrt{\frac{3}{8}} \cdot \sqrt{\frac{3}{2}}$ | 24. $\sqrt{5a^2c} \cdot \sqrt{ac}$ |
| 3. $\sqrt{6} \cdot \sqrt{2}$ | 14. $\sqrt{\frac{8}{7}} \cdot \sqrt{\frac{14}{5}}$ | 25. $\sqrt{x^3} \cdot \sqrt{x^3}$ |
| 4. $\sqrt{8} \cdot \sqrt{3}$ | 15. $\sqrt{18} \cdot \sqrt{32}$ | 26. $\sqrt{b} \cdot \sqrt{2b}$ |
| 5. $\sqrt{7} \cdot \sqrt{14}$ | 16. $\sqrt{17} \cdot \sqrt{51}$ | 27. $\sqrt{45} \cdot \sqrt{80}$ |
| 6. $\sqrt{5} \cdot \sqrt{6}$ | 17. $\sqrt{5} \cdot \sqrt{\frac{3}{5}}$ | 28. $\sqrt{27} \cdot \sqrt{108}$ |
| 7. $\sqrt{3} \cdot \sqrt{3}$ | 18. $22 \cdot 2\sqrt{5}$ | 29. $\sqrt{10} \cdot \sqrt{125}$ |
| 8. $\sqrt{10} \cdot \sqrt{4}$ | 19. $30 \cdot 5\sqrt{7}$ | 30. $\sqrt{8} \cdot \sqrt{6} \cdot \sqrt{3}$ |
| 9. $\sqrt{3} \cdot \sqrt{27}$ | 20. $19 \cdot 2\sqrt{11}$ | 31. $\sqrt{14} \cdot \sqrt{7} \cdot \sqrt{21}$ |
| 10. $\sqrt{15} \cdot \sqrt{5}$ | 21. $\sqrt{a} \cdot \sqrt{a^2}$ | 32. $\sqrt{x} \cdot \sqrt{\frac{4a}{x}}$ |
| 11. $\sqrt{2} \cdot \sqrt{18}$ | 22. $\sqrt{a^3} \cdot \sqrt{a^4}$ | |

Irrational Numbers

431

- | | | |
|--|--|---------------------------------------|
| 33. $\sqrt{98x} \cdot \sqrt{\frac{1}{2}x}$ | 40. $7\sqrt{21} \cdot 3\sqrt{3}$ | 47. $(2\sqrt{12})^2$ |
| 34. $\sqrt{\frac{10}{11}} \cdot \sqrt{\frac{22}{5}}$ | 41. $20\sqrt{20} \cdot 5\sqrt{5}$ | 48. $(5\sqrt{3x})^2$ |
| 35. $\sqrt{\frac{14}{27}} \cdot \sqrt{\frac{4}{21}}$ | 42. $6\sqrt{14} \cdot 2\sqrt{7}$ | 49. $5(\sqrt{3x})^2$ |
| 36. $\sqrt{\frac{86}{25}} \cdot \sqrt{\frac{125}{54}}$ | 43. $8a\sqrt{5a} \cdot 3\sqrt{10a}$ | 50. $6\sqrt{(3x)^2}$ |
| 37. $\sqrt{3b} \cdot \sqrt{6b} \cdot \sqrt{b}$ | 44. $3\sqrt{6} \cdot 5\sqrt{5} \cdot 2\sqrt{15}$ | 51. $\sqrt{5(3x)} \cdot 5\sqrt{3x}$ |
| 38. $4\sqrt{10} \cdot 5\sqrt{12}$ | 45. $(5\sqrt{3})^2$ | 52. $7(3\sqrt{7})^2$ |
| 39. $3\sqrt{5} \cdot 2\sqrt{5}$ | 46. $(2\sqrt{6})^2$ | 53. $5x^2\sqrt{5x^2} \cdot 5\sqrt{x}$ |

Pages 430-431

- | | | | |
|-----------------|-------------------|---------------------------|----------------------|
| 1. 6 | 14. $\sqrt{2}$ | 28. 54 | 41. 1000 |
| 2. 7 | 15. 24 | 29. $25\sqrt{2}$ | 42. $84\sqrt{2}$ |
| 3. $2\sqrt{3}$ | 16. $17\sqrt{3}$ | 30. 12 | 43. $120a^2\sqrt{2}$ |
| 4. $2\sqrt{6}$ | 17. $\sqrt{3}$ | 31. $7\sqrt{42}$ | 44. $450\sqrt{2}$ |
| 5. $7\sqrt{2}$ | 18. $44\sqrt{5}$ | 32. $2\sqrt{a}$ | 45. 75 |
| 6. $\sqrt{30}$ | 19. $150\sqrt{7}$ | 33. $7x$ | 46. 24 |
| 7. 3 | 20. $36\sqrt{11}$ | 34. 2 | 47. 48 |
| 8. $2\sqrt{10}$ | 21. $a\sqrt{a}$ | 35. $\frac{2\sqrt{2}}{9}$ | 48. $75x$ |
| 9. 9 | 22. $a^3\sqrt{a}$ | 36. $\frac{4\sqrt{6}}{3}$ | 49. $15x$ |
| 10. $5\sqrt{3}$ | 23. $ab\sqrt{6}$ | 37. $3b\sqrt{2b}$ | 50. $18x$ |
| 11. 6 | 24. $ac\sqrt{6a}$ | 38. $40\sqrt{30}$ | 51. $15x\sqrt{5}$ |
| 12. 2 | 25. x^3 | 39. 30 | 52. 441 |
| 13. 1 | 26. $b\sqrt{2}$ | 40. $63\sqrt{7}$ | 53. $2bx^3\sqrt{5x}$ |
| | 27. 60 | | |