

Use rational exponents to simplify each expression. If rational exponents appear after simplifying, write the answer in radical notation. Assume that all variables represent positive numbers. Note: Treat  $\sqrt[n]{-}$  as the same as  $\sqrt{-}$

Random Seed: 707325

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|---------------------------------|---|---|
| 1. $\sqrt[7]{x^{35}}$           | 22. $\sqrt[18]{x^2}$                      | 43. $\frac{\sqrt[6]{x^3}}{\sqrt[4]{x^2}}$ |
| 2. $\sqrt[5]{32x^{10}}$         | 23. $\sqrt[12]{x^3}$                      | 44. $\frac{\sqrt[7]{x^3}}{\sqrt[4]{x}}$   |
| 3. $\sqrt[7]{2187x^{21}y^{28}}$ | 24. $\sqrt[9]{x^3}$                       | 45. $\frac{\sqrt[5]{x^7}}{\sqrt[3]{x^3}}$ |
| 4. $\sqrt[7]{2187x^{21}}$       | 25. $\sqrt[30]{x^5}$                      | 46. $\frac{\sqrt[3]{x^4}}{\sqrt[5]{x}}$   |
| 5. $\sqrt[3]{8x^{15}}$          | 26. $\sqrt[44]{x^4}$                      | 47. $\frac{\sqrt[4]{x^8}}{\sqrt[3]{x^3}}$ |
| 6. $\sqrt[6]{x^{24}}$           | 27. $\sqrt[24]{x^4}$                      | 48. $\frac{\sqrt[3]{x^5}}{\sqrt[5]{x}}$   |
| 7. $\sqrt[3]{8x^{12}}$          | 28. $\sqrt[35]{x^5}$                      | 49. $\frac{\sqrt[7]{x^4}}{\sqrt[4]{x}}$   |
| 8. $\sqrt[4]{x^{20}y^8}$        | 29. $\sqrt[20]{x^4}$                      | 50. $\frac{\sqrt[3]{x^4}}{\sqrt[5]{x}}$   |
| 9. $\sqrt[6]{x^{24}}$           | 30. $\sqrt[40]{x^4}$                      | 51. $\sqrt[4]{2\sqrt{x}}$                 |
| 10. $\sqrt[4]{81x^{16}}$        | 31. $\sqrt[5]{x^4} \cdot \sqrt[3]{x}$     | 52. $\sqrt[3]{2\sqrt{x}}$                 |
| 11. $(\sqrt[7]{x})^{28}$        | 32. $\sqrt[4]{x^2} \cdot \sqrt[5]{x}$     | 53. $\sqrt[3]{6\sqrt{x}}$                 |
| 12. $(\sqrt[5]{x})^{20}$        | 33. $\sqrt[6]{x^3} \cdot \sqrt[4]{x^5}$   | 54. $2\sqrt[2]{\sqrt[4]{x}}$              |
| 13. $(\sqrt[7]{x})^{56}$        | 34. $\sqrt[7]{x^4} \cdot \sqrt[4]{x^4}$   | 55. $\sqrt[4]{6\sqrt{x}}$                 |
| 14. $(\sqrt[7]{x})^{56}$        | 35. $\sqrt[5]{x^2} \cdot \sqrt[3]{x^4}$   | 56. $\sqrt[3]{4\sqrt[4]{x}}$              |
| 15. $(\sqrt[3]{x})^{15}$        | 36. $\sqrt[3]{x^4} \cdot \sqrt[5]{x^4}$   | 57. $2\sqrt[2]{\sqrt[4]{x}}$              |
| 16. $(\sqrt[6]{x})^{24}$        | 37. $\sqrt[4]{x^4} \cdot \sqrt[3]{x^4}$   | 58. $\sqrt[3]{2\sqrt{x}}$                 |
| 17. $(\sqrt[3]{x})^{12}$        | 38. $\sqrt[3]{x} \cdot \sqrt[5]{x}$       | 59. $\sqrt[3]{2\sqrt[2]{x}}$              |
| 18. $(\sqrt[4]{x})^8$           | 39. $\sqrt[7]{x} \cdot \sqrt[4]{x^4}$     | 60. $2\sqrt[2]{\sqrt[5]{x}}$              |
| 19. $(\sqrt[6]{x})^{12}$        | 40. $\sqrt[3]{x^2} \cdot \sqrt[5]{x^5}$   |   |
| 20. $(\sqrt[4]{x})^{12}$        | 41. $\frac{\sqrt[5]{x^9}}{\sqrt[3]{x^3}}$ |   |
| 21. $\sqrt[25]{x^5}$            | 42. $\frac{\sqrt[4]{x^5}}{\sqrt[5]{x^3}}$ |   |

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|--------------|-------------------------|-------------------------|
| 1. $x^5$     | 21. $\sqrt[5]{x}$       | 41. $\sqrt[5]{x^4}$     |
| 2. $2x^2$    | 22. $\sqrt[9]{x}$       | 42. $\sqrt[20]{x^{13}}$ |
| 3. $3x^3y^4$ | 23. $\sqrt[4]{x}$       | 43. $\sqrt[1]{1}$       |
| 4. $3x^3$    | 24. $\sqrt[3]{x}$       | 44. $\sqrt[28]{x^5}$    |
| 5. $2x^5$    | 25. $\sqrt[6]{x}$       | 45. $\sqrt[5]{x^2}$     |
| 6. $x^4$     | 26. $\sqrt[11]{x}$      | 46. $\sqrt[15]{x^{17}}$ |
| 7. $2x^4$    | 27. $\sqrt[6]{x}$       | 47. $\sqrt[1]{x}$       |
| 8. $x^5y^2$  | 28. $\sqrt[7]{x}$       | 48. $\sqrt[15]{x^{22}}$ |
| 9. $x^4$     | 29. $\sqrt[5]{x}$       | 49. $\sqrt[28]{x^9}$    |
| 10. $3x^4$   | 30. $\sqrt[10]{x}$      | 50. $\sqrt[15]{x^{17}}$ |
| 11. $x^4$    | 31. $\sqrt[15]{x^{17}}$ | 51. $\sqrt[8]{x}$       |
| 12. $x^4$    | 32. $\sqrt[10]{x^7}$    | 52. $\sqrt[6]{x}$       |
| 13. $x^8$    | 33. $\sqrt[4]{x^7}$     | 53. $\sqrt[18]{x}$      |
| 14. $x^8$    | 34. $\sqrt[7]{x^{11}}$  | 54. $\sqrt[8]{x}$       |
| 15. $x^5$    | 35. $\sqrt[15]{x^{26}}$ | 55. $\sqrt[24]{x}$      |
| 16. $x^4$    | 36. $\sqrt[15]{x^{32}}$ | 56. $\sqrt[12]{x}$      |
| 17. $x^4$    | 37. $\sqrt[3]{x^7}$     | 57. $\sqrt[8]{x}$       |
| 18. $x^2$    | 38. $\sqrt[15]{x^8}$    | 58. $\sqrt[6]{x}$       |
| 19. $x^2$    | 39. $\sqrt[7]{x^8}$     | 59. $\sqrt[6]{x}$       |
| 20. $x^3$    | 40. $\sqrt[3]{x^5}$     | 60. $\sqrt[10]{x}$      |