

EXTRA PRACTICE — Exercises

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Unit VII – Relations of Rational Number Degree Part B – Operations with Radical Expressions Lesson 1 – Multiplication

For each of the following, find the indicated product.

1. $7^4\sqrt{2} \cdot 8^4\sqrt{32}$

2. $\sqrt[5]{y^6} \cdot \sqrt[3]{y^4}$

3. $(7\sqrt{6})(-3\sqrt{10})$

4. $\sqrt{3x^2z^3} \cdot \sqrt{15x^2z}$

5. $(\sqrt[3]{96^7})(\sqrt[3]{12b^5})$

6. $\sqrt[4]{8a^5} \cdot \sqrt[4]{4a^7}$

7. $\sqrt{8x^2} \cdot \sqrt{12xy^2}$

8. $\sqrt{10x^2y} \cdot \sqrt{40xy^3}$

9. $\sqrt[4]{7d^5} \cdot \sqrt[4]{8d^3} \cdot \sqrt[4]{2d^3}$

10. $7\sqrt[3]{27n^2} \cdot 4\sqrt[3]{8n}$

11. $\sqrt[3]{54x^2y^2} \cdot \sqrt[3]{5x^3y^4}$

12. $\sqrt[3]{5} \cdot \sqrt[3]{5} \cdot \sqrt[3]{5}$

13. $\sqrt[3]{y^2} \cdot \sqrt[4]{y^5}$

14. $\sqrt{12m^2n} \cdot \sqrt{6mn^2}$

15. $\sqrt[4]{4t^3} \cdot \sqrt[4]{8t^2v^5}$

16. $\sqrt[4]{8x^5} \cdot \sqrt[4]{20x^2}$

17. $3\sqrt[3]{4x^2} \cdot 7\sqrt[3]{12x^4}$

18. $\sqrt[3]{2x} \cdot \sqrt[3]{4} \cdot \sqrt[3]{2x^2}$

19. $\sqrt[5]{10a^7} \cdot \sqrt[5]{2a} \cdot \sqrt[5]{16a^4}$

20. $-\sqrt[3]{2x^2y^2} \cdot 2\sqrt[3]{16x^5y}$

EXTRA PRACTICE — Answer Key

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For each of the following, find the indicated product.

1. $56\sqrt[4]{64}$

2. $\sqrt[15]{y^{38}}$

3. $-21\sqrt{60}$

4. $\sqrt{45x^4z^4}$

5. $\sqrt[3]{108b^{12}}$

6. $\sqrt[4]{32a^{12}}$

7. $\sqrt{96x^3y^2}$

8. $\sqrt{400x^3y^4}$

9. $\sqrt[4]{112d^{11}}$

10. $28\sqrt[3]{216n^3}$

11. $\sqrt[3]{270x^5y^7}$

12. $\sqrt[3]{5^3}$

13. $\sqrt[4]{y^7}$

14. $\sqrt{72m^3n^3}$

15. $\sqrt[4]{32t^5v^5}$

16. $\sqrt[4]{160x^7}$

17. $21\sqrt[3]{48x^6}$

18. $\sqrt[3]{16x^3}$

19. $\sqrt[5]{320a^{12}}$

20. $-2\sqrt[3]{32x^7y^3}$