

Practice 9-4

Mixed Exercises

Simplify each radical expression. Assume that all variables under radicals represent positive numbers.

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|-------------------------|-----------------------------------|--|-----------------------------------|-----------------------------------|
| 1. $\sqrt{32}$ | 2. $\sqrt{22} \cdot \sqrt{8}$ | 3. $\sqrt{147}$ | 4. $\sqrt{\frac{17}{144}}$ | 5. $\sqrt{a^2b^5}$ |
| 6. $\frac{2}{\sqrt{6}}$ | 7. $\sqrt{80}$ | 8. $\sqrt{27}$ | 9. $\frac{\sqrt{256}}{\sqrt{32}}$ | 10. $\frac{8}{\sqrt{7}}$ |
| 11. $\sqrt{12x^4}$ | 12. $\frac{\sqrt{96}}{\sqrt{12}}$ | 13. $\sqrt{200}$ | 14. $\sqrt{\frac{12}{225}}$ | 15. $\sqrt{15} \cdot \sqrt{6}$ |
| 16. $\sqrt{120}$ | 17. $\frac{4}{\sqrt{2a}}$ | 18. $(3\sqrt{2})^3$ | 19. $\sqrt{250}$ | 20. $\frac{\sqrt{65}}{\sqrt{13}}$ |
| 21. $\sqrt{84}$ | 22. $\sqrt{\frac{18}{121}}$ | 23. $\sqrt{48s^3}$ | 24. $3\sqrt{24}$ | 25. $\sqrt{15} \cdot \sqrt{35}$ |
| 26. $\sqrt{160}$ | 27. $\frac{6}{\sqrt{3}}$ | 28. $\frac{\sqrt{48n^6}}{\sqrt{6n^3}}$ | 29. $\sqrt{136}$ | 30. $\sqrt{\frac{27x^2}{256}}$ |
| 31. $\sqrt{m^3n^2}$ | 32. $\frac{\sqrt{180}}{\sqrt{9}}$ | 33. $\sqrt{18} \cdot \sqrt{8}$ | 34. $(10\sqrt{3})^2$ | 35. $\sqrt{\frac{17}{64}}$ |

Use the Pythagorean theorem to find n . Express n as a radical in simplest form.

