10-2 **Practice**

Simplifying Radicals

Simplify each radical expression.

1. $\sqrt{12}$

2. $\sqrt{28}$

3. $\sqrt{180}$

4. $\sqrt{75a^2}$

5. $\sqrt{45x^6y^2}$

6. $\sqrt{27m^3n^5}$

7. $-2\sqrt{36x^{13}y^7}$

8. $\sqrt{21a^3b} \cdot \sqrt{3ab^5}$

9. $3\sqrt{2m^2} \cdot 5\sqrt{10m}$

10. $4\sqrt{24a} \cdot \sqrt{32a}$

11. $\frac{1}{4}\sqrt{x^5y^4} \cdot 8\sqrt{x^3y}$

12. $\frac{2}{3}\sqrt{15x^7} \cdot 6\sqrt{3x^2}$

Simplify each radical expression.

13. $\sqrt{\dfrac{36}{25}}$

14. $\dfrac{2}{\sqrt{7}}$

15. $\dfrac{\sqrt{5}}{\sqrt{3x}}$

16. $\dfrac{3}{\sqrt{49x}}$

17. A carpenter is building rectangular walls for a room addition. The width of a section of wall is two times the height. Each section has a brace that connects two opposite corners of the section. What is a simplified expression for the length of each brace?

18. A walking path, shaped like a rectangle, has a length 7 times the width, w. What is a simplified expression for the distance between opposite corners of the walking path?