

Name: _____
Algebra 1

Date: _____
Band: _____

LT#1: Simplify radicals involving products and quotients.

1. Explain how you can tell whether a radical expression is in simplified form.

2. Is the radical expression in simplified form? Explain.

A. $\frac{\sqrt{31}}{3}$

B. $7\sqrt{\frac{6}{11}}$

C. $-5\sqrt{175}$

Simplify.

3. $\sqrt{72}$

4. $\sqrt{98}$

5. $\sqrt{16b^5}$

6. $-m\sqrt{80m^9}$

7. $3\sqrt{6} \cdot \sqrt{18}$

8. $\sqrt{2a} \cdot \sqrt{9a^3}$

9. $3\sqrt{5m} \cdot 4\sqrt{\frac{1}{5}m^3}$

10. $7\sqrt{5x} \cdot 3\sqrt{20x^5}$

11. Simplify $\frac{3}{\sqrt{12}}$ two different ways. Which way do you prefer? Explain.

Simplify.

12. $\sqrt{\frac{144}{9}}$

13. $\sqrt{\frac{15x}{x^3}}$

14. $\sqrt{\frac{36a}{4a^3}}$

15. $\sqrt{\frac{25y^3}{z^2}}$

16. $\frac{\sqrt{2}}{\sqrt{3}}$

17. $\frac{\sqrt{5}}{\sqrt{3}}$

18. $\frac{\sqrt{5}}{\sqrt{18m}}$

19. $\frac{\sqrt{6}}{\sqrt{2n}}$

20. $\sqrt{\frac{7s}{3}}$