

Name \_\_\_\_\_

Date \_\_\_\_\_

**Practice Set 9.2**  
Multiplying and Dividing Radicals

Simplify each radical expression. Assume that variable expressions in radicands represent positive real numbers.

1.  $\sqrt{18}$  1. \_\_\_\_\_

2.  $\sqrt{45}$  2. \_\_\_\_\_

3.  $\sqrt{20x^2}$  3. \_\_\_\_\_

4.  $\sqrt{56y^2}$  4. \_\_\_\_\_

5.  $\sqrt{72a^8}$  5. \_\_\_\_\_

6.  $\sqrt{44x^6}$  6. \_\_\_\_\_

7.  $\sqrt[3]{54y^3}$  7. \_\_\_\_\_

8.  $\sqrt{\frac{3}{4}}$  8. \_\_\_\_\_

9.  $\sqrt{28y^{12}}$  9. \_\_\_\_\_

10.  $\sqrt[3]{\frac{3}{8}}$  10. \_\_\_\_\_

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11.  $\sqrt{300x^{15}}$

11. \_\_\_\_\_

12.  $\frac{\sqrt{50x^9}}{\sqrt{5x^3}}$

12. \_\_\_\_\_

13.  $\sqrt{108a^5}$

13. \_\_\_\_\_

14.  $\frac{\sqrt{40x^2}}{\sqrt{10x^2}}$

14. \_\_\_\_\_

15.  $\sqrt{\frac{100x^9}{5x^2}}$

15. \_\_\_\_\_

Multiply and simplify, if possible.

16.  $\sqrt{5} \cdot \sqrt{15}$

16. \_\_\_\_\_

17.  $\sqrt{3x} \cdot \sqrt{3x}$

17. \_\_\_\_\_

18.  $\sqrt{6a^3} \cdot \sqrt{10a^3}$

18. \_\_\_\_\_

19.  $\sqrt[4]{4y^3} \cdot \sqrt[4]{8y}$

19. \_\_\_\_\_

20.  $\sqrt[3]{40x} \cdot \sqrt[3]{2x^6}$

20. \_\_\_\_\_