

Multiply + Divide Monomials

Name: _____

Simplify.

1. $8x^5(3x)$

2. $-90x^3(5x^5)$

3. $-5x^3(3x^7)$

4. $15x^4(3x^9)$

5. $10x^2y^5(9x^3y)$

6. $-100x^2y^4(5x^{10}y^9)$

7. $-8x^6y^{10}(-5x^6y^8)$

8. $10x^{20}y(x^3y^{90})$

9. $9x^2y^9(8x^{10}y^9)$

10. $-11x^2(11x^6y^{10})$

11. $\frac{30x^{10}}{5x^3}$

12. $\frac{32x^{12}}{2x^{10}}$

13. $\frac{55x^6}{11x^2}$

14. $\frac{16y^5}{8y^3}$

15. $\frac{80x^5y^7}{4x^2y^3}$

16. $\frac{-25x^7y^9}{5x^2y^7}$

17. $\frac{-70x^8y^{10}}{10x^3y^7}$

18. $\frac{60x^9y^5}{4x^6y^4}$

19. $\frac{10x^8y^5}{4x^2y^5}$

20. $\frac{6x^5y^5}{12x^4y}$

21. $\frac{20x^3y^8}{30x^3y^7}$

22. $\frac{144x^5y^{18}}{12x^4y^2}$

23. What is the area of a rectangle with length $7xy^2$ inches and width $(8x^2y)$ inches? Write your answer as an expression in terms of x and y .

24. Use $\frac{x^2}{x^2}$ and the rules of dividing monomials to explain why $x^0 = 1$.

25. Correct the Error

There is an error in the student work shown below:

Question: Simplify $\frac{80x^9}{16x^4}$.

Solution:

$$\begin{aligned} & \frac{80x^9}{16x^4} \\ &= \frac{64x^9}{x^4} \\ &= 64x^5 \end{aligned}$$

What is the error? Explain how to solve the problem.
