

Name: _____

Directions: Simplify each exponential expression. Do NOT leave negative exponents in your answers.

Question	Answer	Question	Answer
1. $2x^2 \bullet 2x^3$		2. $x^4 \bullet 2x^{-3}$	
3. $(2x^3y^{-3})(2x^{-1}y^3)$		4. $4x^4 \bullet 2x^{-3}$	
5. $2y^2 \bullet 3x$		6. $4x^3y^2 \bullet 3x^{-4}y^{-3}$	
7. $(x^2)^0$		8. $(4x^3)^2$	
9. $(4x^0)^4$		10. $(2x^2)^{-4}$	
11. $(x^2y^{-1})^2$		12. $(2x^4y^{-3})^{-1}$	

Question	Answer	Question	Answer
13. $(3x)^{-2}$		14. $\frac{x^2}{2x^3}$	
15. $\frac{x^{-1}}{4x^4}$		16. $\frac{3x^{-4}}{x^3}$	
17. $\frac{2x^4 y^{-4} z^{-3}}{3x^2 y^{-3} z^4}$		18. $\frac{4x^0 y^{-2} z^3}{4x}$	
19. $\frac{2x^3 y^{-3} z^4}{3yz}$		20. $(2x^4)^{-1}$	
21. $\frac{3x^3 y^{-1} z^{-1}}{x^{-4} y^0 z^0}$		22. $(4xy)^{-1}$	
23. $\frac{4x^4 y^3 z^3}{3x^2 y^2 z^4}$		24. $4x^3(xy^2)$	

Directions: Cut out all of these squares. Match them to their simplified exponential expressions.

$$4x^5$$

$$4x^4y^2$$

$$2x$$

$$\frac{4x^2y}{3z}$$

$$\frac{1}{4xy}$$

$$4x^2$$

$$6y^2x$$

$$\frac{3x^7}{yz}$$

$$8x$$

$$16x^6$$

$$\frac{12}{xy}$$

$$\frac{1}{2x^4}$$

$$1$$

$$\frac{2x^2}{3yz^7}$$

$$\frac{2x^3z^3}{3y^4}$$

$$\frac{z^3}{y^2x}$$

$$\frac{1}{4x^5}$$

$$\frac{1}{9x^2}$$

$$\frac{1}{16x^8}$$

$$256$$

$$\frac{y^3}{2x^4}$$

$$\frac{3}{x^7}$$

$$\frac{x^4}{y^2}$$

$$\frac{1}{2x}$$