

Exponents – Simplifying Exponents with Algebraic Expression as a base

Directions: Simplifying each expression. Use your answer to navigate through the maze. Show your work.

START
 $4x^4y^3 \cdot 6x^{-2}y^{-5}$

→ $\frac{24x^2}{y^2}$

↓ $-2y^4 \cdot 8x^6y^6$

↓ $16x^{10}y^{12}$

↓ $\frac{25x^2y^6}{5y^{-4}}$

↓ $5x^2y^{10}$

↓ $\frac{15xy^6}{3xy^4}$

→ $24xy^2$

→ $32x^5y^{243}$

→ $-16x^6y^{10}$

→ $10x^{25}y^{10}$

→ $4x^2$

→ $\frac{1}{196x^4}$

→ $5y^2$

→ $(2xy^3)^5$

→ $(3x^2y^4)^{-3}$

→ $(14x^2)^{-2}$

→ $(6x^4y^{-1})^0$

→ $32x^5y^{15}$

→ $\frac{1}{27x^6y^{12}}$

→ $\frac{-4}{x^2}$

→ $32x^5y^{15}$

→ $2xy^7$

→ $\frac{1}{27x^2}$

→ $\frac{3x^2y^5}{5}$

→ $-4x^{-2}$

→ 0

→ 1

→ $\frac{4xy^{-4}}{2y^3}$

→ $\frac{3y^6}{5x^2y}$

→ $\frac{6x^{-5}y^3}{24x^2}$

→ $\frac{64}{4x^{-3}y^{-3}}$

→ $\frac{x}{2y^7}$

→ $\frac{3y^5}{5x^2}$

→ $16x^3y^3$

→ $\frac{2x}{y^7}$

→ $\frac{2}{3y^7}$

→ $\frac{6}{x^8}$

→ $\frac{6x^3}{y^4}$

→ $\frac{1}{6x^3y^3}$

→ $\frac{1}{x^3y^2}$

→ $(3x^0y^4)^2$

→ $\frac{6x^4}{x^{-4}}$

→ $3y^{-4} \cdot 2x^3y^{-8}$

→ $6y^8$

→ $6x^8$

→ $6x^3y^{12}$

→ **Good Job!**

→ **The End**