9/2/17

1. $(3^2)^3 \quad 3=2\cdot 3 = \boxed{3^6}$

2. $4^2 \cdot 4^3 = 4^{2+3} = \boxed{4^5}$

3 $\frac{4^6}{4^8} \quad 4^{6-8} = \boxed{4^{-2}} \simeq \frac{1}{4^2} = \frac{1}{16}$

4 $10^1 = 10^{\not 0}$

$\frac{122}{1} \cdot \frac{7}{10} = \frac{854}{10} = 85.4$

9/5/17 $x^1 \cdot x^1 \cdot x^1 \cdot x^1 = x^4$ * NOT the same !! *

Product/ Exponent Rule $x + x + x + x = 4x$

$\frac{x^4 y^5}{x^2 y^3} = x^{4-2} y^{5-3} = x^2 y^2$ Quotient Rule

Zero $x^0 \cdot y^0 = x^1 y^1 = 1$

9/9/17 $2 \cdot x^3 y^{-3} \cdot 2 \cdot x^{-1} y^3 = 4x^{3+(-1)} y^{-3+3} = 4x^2 y^{\not 0} = 4x^2$

$x^3 \cdot x^{-1} = x^{3+(-1)}$

$\frac{2x^3}{y^3} \cdot \frac{2y^3}{x} = \frac{4x^3 y^3}{x^1 y^3} = 4x^{3-1} y^{3-3}$

$\frac{60}{12} x^{3-1} = 5x^2$ $(2x^2)^{-4} = 2x^{2\cdot -4} = 2x^{-8}$

$2^{1\cdot -4} x^{2\cdot -4} = 2^{-4} x^{-8}$