

Laws of Exponentse Day 3

Date _____ Period _____

Simplify. Your answer should contain only positive exponents.

1) $3x^3y^{-3} \cdot -4xy^2$

2) $(3m^2n^4)^2$

3) $\frac{-xy}{-4x^{-4}y^3}$

4) $-\frac{4x^{-2}y^0}{yx^0}$

5) $\frac{-3xy^4}{-3x^3y^4z^3}$

6) $\frac{(2n^{-4})^4}{2n^4 \cdot 2n^{-3}}$

$$7) uv^3 \cdot (-2uv)^3$$

$$8) \frac{-3x^0y^{-1} \cdot -4x^4}{-yx^2}$$

$$9) \frac{(m^3n^2)^{-1}}{-n^{-1}}$$

#10-12 are challenge problems. Try your best!

$$10) \left((-u^4v^2)^{-1} \cdot -2u^3v^{-4} \right)^4$$

$$11) \left(\frac{-m^{-3} \cdot m^3n^4}{-2m^4n^2} \right)^2$$

$$12) \frac{2x^{-3}y^2z^2 \cdot (-2x^4y^4z^{-1})^2}{-zx^{-1}y^3 \cdot 2xy^{-1}z^3}$$

Answers to Laws of Exponentse Day 3

$$1) -\frac{12x^4}{y}$$

$$5) \frac{1}{x^2z^3}$$

$$9) -\frac{1}{m^3n}$$

$$2) 9m^4n^8$$

$$6) \frac{4}{n^{17}}$$

$$10) \frac{16}{u^4v^{24}}$$

$$3) \frac{x^5}{4y^2}$$

$$7) -8u^4v^6$$

$$11) \frac{n^4}{4m^8}$$

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

$$8) -\frac{12x^2}{y^2}$$

$$12) -\frac{4y^8x^5}{z^4}$$