

Exponent Rules Review

Simplify. Your answer should contain only positive exponents.

$$1) 6x^5 \cdot 4x^{-2}y^{-5}$$

$$\frac{24x^3}{y^5}$$

$$3) 5m^{-5}n^6 \cdot 2m^3n^4 \cdot 4m^2n^5$$

$$40n^{15}$$

$$5) 6m^2n^{-2} \cdot m^{-5}n^{-1}$$

$$\frac{6}{n^3m^3}$$

$$7) -5m^3p^3q^{-1} \cdot -6m^4q^5$$

$$30m^7p^3q^4$$

$$9) (4a^6)^3$$

$$64a^{18}$$

$$11) (3u^2)^2$$

$$9u^4$$

$$13) (2h^2)^6$$

$$64h^{12}$$

$$15) (-4m^{-3}n^2p^5)^6$$

$$\frac{4096n^{12}p^{30}}{m^{18}}$$

$$17) \frac{4y^4z^{-1}}{x^{-6}z^4}$$

$$\frac{4y^4x^6}{z^5}$$

$$19) \frac{6p^4q^{-4}}{4rp^{-1}q^5}$$

$$\frac{3p^5}{2q^9r}$$

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

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

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

$$\frac{2y^{10}}{x^2}$$

$$6) -4x^2 \cdot x^4y^3z^5$$

$$-4x^6y^3z^5$$

$$8) -3p^{-6}q^4r^{-1} \cdot 3p^5q^{-3}r^5$$

$$-\frac{9qr^4}{p}$$

$$10) (b^{-6})^{-6}$$

$$b^{36}$$

$$12) (3x^2y^{-2})^{-4}$$

$$\frac{y^8}{81x^8}$$

$$14) (4xy)^{-1}$$

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

$$16) \frac{2h^{-1}k^4}{3j^{-6}}$$

$$\frac{2k^4j^6}{3h}$$

$$18) \frac{3x^5y^2z^{-1}}{yz^4}$$

$$\frac{3x^5y}{z^5}$$

$$20) \frac{2x^2y^3z^{-1}}{4yx^5z^{-4}}$$

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