

Laws of Exponents practice

Date _____

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Simplify. Your answer should contain only positive exponents.

1) $3m^4 \cdot 3m^3$

2) $6p^4 \cdot 8p^2 \cdot 7p$

3) $4x^2y^4 \cdot 3x^2$

4) $7ab^4 \cdot 3a^4b^2$

5) $\frac{4m^4n^4}{10nm^2}$

6) $\frac{11a^6b^3}{a^2b^3}$

7) $(8xy^3)^3$

8) $(4nm^4)^3$

9) $\frac{-8n^2 \cdot -8nm^2}{-4nm^4}$

10) $\frac{4a^3}{2a^4b^4 \cdot 6a^2b^2}$

11) $\frac{4x^3 \cdot 8x^{-2}}{2x^4}$

12) $\frac{5p^{-1}}{8p^3 \cdot p^2}$

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Simplify. Your answer should contain only positive exponents.

$$1) 3m^4 \cdot 3m^3$$

$$9m^7$$

$$2) 6p^4 \cdot 8p^2 \cdot 7p$$

$$336p^7$$

$$3) 4x^2y^4 \cdot 3x^2$$

$$12x^4y^4$$

$$4) 7ab^4 \cdot 3a^4b^2$$

$$21a^5b^6$$

$$5) \frac{4m^4n^4}{10nm^2}$$

$$\frac{2m^2n^3}{5}$$

$$6) \frac{11a^6b^3}{a^2b^3}$$

$$11a^4$$

$$7) (8xy^3)^3$$

$$512x^3y^9$$

$$8) (4nm^4)^3$$

$$64n^3m^{12}$$

$$9) \frac{-8n^2 \cdot -8nm^2}{-4nm^4}$$

$$-\frac{16n^2}{m^2}$$

$$10) \frac{4a^3}{2a^4b^4 \cdot 6a^2b^2}$$

$$\frac{1}{3a^3b^6}$$

$$11) \frac{4x^3 \cdot 8x^{-2}}{2x^4}$$

$$\frac{16}{x^3}$$

$$12) \frac{5p^{-1}}{8p^3 \cdot p^2}$$

$$\frac{5}{8p^6}$$