

8-1 8-2 Multiplying Monomials

Date _____ Period _____

Simplify. Your answer should contain only positive exponents.

1)
$$\frac{x^{-4}y^{-2}}{(-x^2y^{-3} \cdot (-2x^0y^{-2})^{-4})^{-1}} - \frac{y^3}{16x^2}$$

2)
$$\frac{u^0v^3}{(2vu^2)^4 \cdot -v^0} - \frac{1}{16vu^8}$$

3)
$$\left(\frac{nm^{-3}}{-2mnm^3}\right)^4 \frac{1}{16m^{28}}$$

4)
$$\frac{(-x^{-2}y^4)^4 \cdot -2x^2y^4}{x^3y^3} - \frac{2y^{17}}{x^9}$$

5)
$$-\frac{mn^0}{(m^2n^{-2})^3 \cdot (-nm^2)^0} - \frac{n^6}{m^5}$$

6)
$$-\frac{a^3}{2a^3 \cdot (2a^3b^3)^4} - \frac{1}{32a^{12}b^{12}}$$

7)
$$-\frac{vu^{-1} \cdot -2vu^0}{(2u^{-4}v^2)^2} \frac{u^7}{2v^2}$$

8)
$$\frac{2ba^4 \cdot (-2ba^2)^{-2}}{-2ab^2} - \frac{1}{4b^3a}$$

9)
$$-\frac{x^4y^{-2}}{xy^3 \cdot (-2x^2y^2)^2} - \frac{1}{4y^9x}$$

10)
$$\left(\frac{(2x^2y^4)^4}{-2x^4y^4 \cdot 2x^0y^2}\right)^2 \frac{1}{16x^8y^{20}}$$

11)
$$-\frac{x^{-1}y^4 \cdot -2y}{(x^{-1}y^3)^{-3}} \frac{2y^{14}}{x^4}$$

12)
$$\frac{(2yx^3)^2}{-x^3y^4 \cdot 2x^0y^3 \cdot 2xy} - \frac{x^2}{y^6}$$

13)
$$\frac{2x^4}{(x^4y^2)^3 \cdot (2yx^3)^{-4}} \frac{32x^4}{y^2}$$

14)
$$\left(\frac{-y^4}{-x^2y^{-2} \cdot -xy}\right)^2 \frac{y^{10}}{x^6}$$

15)
$$\frac{(-x^{-3}y^3 \cdot -2x^3y^4)^4}{(-y^2)^2 \cdot -2y^{-3}} - \frac{1}{-8y^{27}}$$

16)
$$\frac{(2m^3)^{-4} \cdot (-2nm^{-2})^{-4}}{-2m^{-3}n^3} - \frac{1}{512mn^7}$$

17)
$$-\frac{uv^4}{(-2u^3v^{-1} \cdot (2u^3)^{-2})^2} - \frac{1}{-4v^6u^7}$$

18)
$$\frac{(-2x^{-4}y^0)^2}{-2xy^0 \cdot -x^3} \frac{2}{x^{12}}$$

19)
$$\left(\frac{(2a^3)^0 \cdot 2a^2b^0}{a^{-1}}\right)^{-3} \frac{1}{8a^9}$$

20)
$$-\frac{2x^{-2}y^3}{(-2x^4y^0)^2 \cdot -x^0} \frac{y^3}{2x^{10}}$$