

Name: \_\_\_\_\_

**Monomials**

A) Simplify. Write your final answer without negative exponents.

1)  $(x^3)^2$

2)  $(-x^4y)(-5x^2y^3)$

3)  $(2x^2)(4x^3y^2)$

4)  $(-3a^2b)(6ab^4c)$

5)  $(4a^7b)(23a^2b^5c)^0$

6)  $\left(\frac{3w}{g^6}\right)^4$

7)  $\left(\frac{x^{6m}}{x^{2m+3}}\right)^2 \left(\frac{x^4}{x^m}\right)^3$

8)  $\frac{(a^3b^{-2})^5c^3}{a^{-9}b^{11}(c^4)^{\frac{1}{4}}}$

9)  $\left(\frac{2d^4}{4e}\right)^3$

10)  $\frac{21d^{18}e^5}{7d^{11}e^3}$

11)  $\frac{-16w^7r^2}{-4wr}$

12)  $\left(\frac{-2d^{11}f^6}{c^{18}}\right)^2$

13)  $\frac{42x^4y^{14}}{6x^9y^5}$

14)  $\left(\frac{-4s^6}{t^3r^5}\right)^3$

15)  $\left(\frac{5^8}{5^{-2}}\right) \div \left(\frac{5^{-6}}{5^7}\right)$

16)  $\left(\frac{8}{27}\right)^{-\frac{2}{3}} \left(-\frac{27}{8}\right)^{\frac{4}{3}}$

17)  $\frac{(3x^{-4}y^5)(5xy^{-8})}{(x^{-2})^4 y^{-2}}$

18)  $\frac{a^5b^5c^5}{-a^2b^3c^4}$

B) 19) Evaluate the quotient if  $x = 2$ ,  $y = -2$ , AND  $z = 10$ :

$$\frac{z^4x^2y}{zxy^2}$$