

Simplifying Monomials Homework

Directions: Simplify each expression. The final answer should contain whole number coefficients and positive exponents.

1.
$$\frac{3xy^4 \cdot 7x^8}{12x^9}$$

2.
$$\frac{28x^{10}y^5}{(2x^3)^2}$$

3.
$$\frac{180x^9y^3z^6}{18xy^4z^6}$$

4.
$$\frac{-3(x^3)^4}{81x^{10}} \cdot (-3x^4)^2$$

5.
$$\left(\frac{5x^{15}y^{12}}{20x^{10}y^5}\right)^3$$

6.
$$\left(\frac{(5x^4y)^2}{50x^4}\right)^4$$

7.
$$\left(\frac{(x^7y^3)^2}{-3x^8}\right)^4 \cdot (-3x^8)$$

8.
$$\left(\frac{7x^5y^{10}}{15x^{10}y^{12}}\right)^5 \cdot \left(\frac{10x^8y^{10}}{14y^3}\right)^5$$

9.
$$\left(\left(\frac{7x^5y^{10}}{xy^{20}}\right) \cdot \left(\frac{6y^8}{21x^3}\right)\right)^3$$