M10 - 4.3 - Mult/Add Div/Divide Exponent Laws HW

Write each product of powers as a single power.

$x^2 \times x^2 = x^{2+2} = x^4$

$y^3 \times y^4 =$

$3^2 \times 3^2 =$

$z^3 \times z^2 =$

$m^3 \times m^4 =$

$n^4 \times n^2 =$

$2^2 \times x^3 =$

$(2x)^2 \times (2x)^3 =$

$(3y)^2 \times (2y)^2 =$

Write each quotient of repeated multiplication division statement in faction form then simplify as a single power.

$x^4 \div x^2 = \frac{\cancel{x \times x} \times x \times x}{\cancel{x \times x}} = x^2$

$x^3 \div x^2 =$

$y^2 \div y^2 =$

$z^5 \div z^2 =$

$x^3 \div x^3 =$

$x^2 \div x^3 =$

$(3x)^5 \div (3x)^3 =$

$(2x)^6 \div (2x)^3 =$

$(2x)^8 \div (2x)^7 =$

Write each quotient of powers as a single power.

$x^4 \div x^2 = x^{4-2} = x^2$

$y^4 \div y^2 =$

$m^4 \div m^3 =$

$g^7 \div g^4 =$

$(-2x)^5 \div (-2x)^3 =$

$(-4x)^8 \div (-4x)^7 =$

Write each quotient of powers as a single power.

$\frac{x^5}{x^2} =$

$\frac{y^2}{y} =$

$\frac{(-3x)^4}{(-3x)^2} =$

$\frac{m^5}{m^2} =$

$\frac{b^3}{b^2} =$

$\frac{(-7x)^5}{(-7x)^2} =$

M10 - 4.3 - Distribution Exponent Laws HW

Write the following as a single power.

$(x^3)^2 = x^{3\times2} = x^6$

$(x^2)^3 =$

$(y^3)^2 =$

$(2z^2)^5 =$

$(3x^3)^4 =$

$(x^{-1})^2 =$

Write as a multiplication of two powers.

$[7 \times x]^2 = 7^2x^2 = 49x^2$

$[5 \times y]^2 =$

$[m \times n]^2$

$[7 \times b]^2 =$

$[2x \times 3x]^2 =$

$[3x \times 2y]^2$

$[7x]^2 =$

$[3xy]^2$

$[5x^3]^2 =$

Distribute the power.

$\left(\frac{x}{y}\right)^2 =$

$\left(\frac{3y}{2x}\right)^2$

$\left(\frac{180x^2}{6x}\right)^2 =$

$\left(\frac{24x^5}{2x^4}\right)^2 =$

$\left(\frac{5xy}{35y^2}\right)^2 =$

$\left(\frac{4x}{4x}\right)^2 =$