1-17-19

Bell Work:

Simplify

1) $x^4 \cdot x^3$ $x^{4+3} = x^7$

2) $5x^2 \cdot 3x^7$ $5(3)(x^{2+7}) = 15x^9$

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

$\frac{27}{1}\frac{x^{-2}}{1}y^6 = \frac{27y^6}{x^2}$

Dividing Exponents

- divide integers (if possible)
- subtract exponents (if bases are the same)

1) $\frac{4^5}{4^3}$

4^{5-3}

$4^2 = 16$

2) $\frac{b^5}{b^8}$

$b^{5-8} = b^{-3}$

$= \frac{1}{b^3}$

3) $\frac{4x^{10}}{9x^{10}}$

$\frac{4}{9} x^{10-10}$

$\frac{4}{9} x^0 = \frac{4}{9}$

4) $\frac{10x^7}{2x^3}$

$\frac{10}{2} = 5$

$x^{7-3} = x^4$

$5x^4$

(5) $\frac{4x^{10}}{20x^8}$

$\frac{4}{20} = \frac{2}{10} = \frac{1}{5}$

$x^{10-8} = x^2$

$\frac{1x^2}{5} = \frac{x^2}{5}$

(6) $\frac{3x^7}{21x^9}$

$\frac{3}{21} = \frac{1}{7}$

$x^{7-9} = x^{-2}$

$\frac{1}{7} \cdot \frac{x^{-2}}{1} = \frac{1}{7} \cdot \frac{1}{x^2}$

$\frac{1}{7x^2}$

(12) $\frac{12x^3}{9x^8}$