Algebra 1 Bellwork Tuesday, March 15, 2016

1. Find each. Write answer in both Scientific Notation and Standard Notation.

a. $(2.8 \times 10^4)(3.75 \times 10^3)$

b. $\dfrac{1.21 \times 10^4}{4.4 \times 10^9}$

Simplify each. Make sure answers don't have exponents that are zero or negative.

2. $\dfrac{-4c^{-3}d^2}{6k^{-1}m^0n^5}$

3. $\left(\dfrac{5^{-2}x^7y^{-4}}{3w^5}\right)^{-1}$

4. $-A^2B^{-8}C^2A^{-9}B^5CB^3$

5. $(-2m^4n^{-3}p)(4^2m^5n^2p^6)$

Evaluate each for $A = -4 \quad B = 6 \quad C = 2$
Give fractional answers in reduced form (no decimals)

6. $A^{-2}BC^3$

7. $\left(\dfrac{AB^{-2}}{C^{-2}}\right)^{-1}$

Algebra 1 Bellwork Tuesday, March 15, 2016 Answers

1. Find each. Write answer in both Scientific Notation and Standard Notation.

a. $(2.8 \times 10^4)(3.75 \times 10^3)$

$105{,}000{,}000 = 1.05 \times 10^8$

b. $\dfrac{1.21 \times 10^4}{4.4 \times 10^9}$

$2.75 \times 10^{-6} = .00000275$

Simplify each. Make sure answers don't have exponents that are zero or negative.

2. $\dfrac{-4c^{-3}d^2}{6k^{-1}m^0n^5} = \dfrac{-4\,d^2k}{6\,c^3n^5} = \dfrac{-2\,d^2k}{3c^3n^5}$

3. $\left(\dfrac{5^{-2}x^7y^{-4}}{3w^5}\right)^{-1} = \left(\dfrac{x^7}{5^2 \cdot 3w^5y^4}\right)^{-1} = \left(\dfrac{x^7}{75w^5y^4}\right)^{-1} = \dfrac{75w^5y^4}{x^7}$

4. $-A^2B^{-8}C^2A^{-9}B^5CB^3 = -\dfrac{C^3}{A^7}$

5. $(-2m^4n^{-3}p)(4^2m^5n^2p^6)$ (16)

$-\dfrac{32m^9p^7}{n}$

Evaluate each for $A = -4 \quad B = 6 \quad C = 2$
Give fractional answers in reduced form (no decimals)

6. $A^{-2}BC^3$

$= \dfrac{BC^3}{A^2} = \dfrac{(6)(2)^3}{(-4)^2} = \dfrac{6 \cdot 8}{16} = \dfrac{48}{16} = 3$

7. $\left(\dfrac{AB^{-2}}{C^{-2}}\right)^{-1} = \left(\dfrac{AC^2}{B^2}\right)^{-1} = \dfrac{B^2}{AC^2} = \dfrac{(6)^2}{(-4)(2)^2} = \dfrac{36}{-16} = \dfrac{9}{-4}$