Algebra 1 Bellwork Monday, February 23, 2015

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

a. $(4.2 \times 10^3)(2.5 \times 10^2)$

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 $A = -4$ $B = 6$ $C = 2$

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 Monday, February 23, 2015

ANSWERS

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

a. $(4.2 \times 10^3)(2.5 \times 10^2)$

$1050,000 = 1.05 \times 10^6$

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

$2.75 \times 10^{-6} = 0.00000275$

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

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

3. $\left(\dfrac{5^{-2}x^7y^{-4}}{3w^5}\right)^{-1} = \left(\dfrac{x^7}{3.25w^5y^4}\right)^{-1}$

$= \dfrac{75w^5y^4}{x^7}$

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

$-A^{-7}B^0C^3 = -\dfrac{C^3}{A^7}$

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

$-32m^9n^{-1}p^7 = \dfrac{-32m^9p^7}{n}$

Evaluate each for $A = -4$ $B = 6$ $C = 2$

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

$= \dfrac{(6)^2}{(-4)(2)^2} = \dfrac{36}{-16} = -\dfrac{9}{4}$