

Algebra 1 Bellwork Thursday, March 9, 2016

Simplify each. Make sure exponents aren't negative or zero.

$$1. \frac{-3c^5d^{-7}}{e^{-2}g^0} =$$

$$2. \frac{6^{-2}j^{-3}}{2^{-3}k^{-1}} =$$

$$3. \left(\frac{4^{-2}a^4b^{-7}}{8c^{-2}} \right)^{-1} =$$

Evaluate each expression for $a = -4$, $b = 6$, and $c = -2$. Give fractional answers in reduced form (no decimals)

$$4. 3a^{-2}b =$$

$$5. \frac{c^{-3}}{2a^{-1}} =$$

$$6. -b^{-2}c^2 =$$

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Simplify each. Make sure exponents aren't negative or zero.

$$1. \frac{-3c^5d^{-7}}{e^{-2}g^0} = \frac{-3c^5e^2}{d^7}$$

$$2. \frac{6^{-2}j^{-3}}{2^{-3}k^{-1}} = \frac{2^3k^1}{6^2j^3} = \frac{8k}{36j^3} = \frac{2k}{9j^3}$$

$$3. \left(\frac{4^{-2}a^4b^{-7}}{8c^{-2}} \right)^{-1} = \left(\frac{a^4c^2}{4^2b^7 \cdot 8} \right)^{-1} = \left(\frac{a^4c^2}{128b^7} \right)^{-1} = \frac{128b^7}{a^4c^2}$$

Evaluate each expression for $a = -4$, $b = 6$, and $c = -2$. Give fractional answers in reduced form (no decimals)

$$4. 3a^{-2}b = \frac{9}{8}$$

$$5. \frac{c^{-3}}{2a^{-1}} = \frac{1}{4}$$

$$6. -b^{-2}c^2 = \frac{-1}{9}$$

$$= \frac{3b}{a^2} = \frac{3(6)}{(-4)^2} = \frac{18}{16}$$

$$= \frac{a}{2c^3} = \frac{-4}{2(-2)^3} = \frac{-4}{2(-8)} = \frac{-4}{-16}$$

$$= -1 \cdot b^{-2}c^2 = \frac{-1 \cdot c^2}{b^2} = \frac{-1(-2)^2}{6^2} = \frac{-1 \cdot 4}{36} = \frac{-1}{9}$$