

Algebra 1 Bellwork Thursday, February 12, 2015

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

1. $-12w^{-2} =$

2. $\frac{4^{-2}m^0}{n^{-3}} =$

3. $c^{-1}d^3x^{-4} =$

4. $\frac{x^{-3}y^{-4}}{-8z^5} =$

5. $\frac{-10c^{-1}}{5^{-1}e^{-3}} =$

6. $\frac{6^{-2}h^{-4}j^0m^{-2}}{9^{-1}n^{-3}q^5} =$

6. $\left(\frac{h^6k^7}{c^3}\right)^{-1} =$

7. $\left(\frac{a^{-4}b^{-2}}{g^5}\right)^{-1} =$

Evaluate each expression for $x = -6$ and $y = 4$. Give fractional answers in reduced form (no decimals)

8. $x^{-2}y =$

9. $-y^{-3} =$

10. $2x^2y^{-2} =$

11. $(2y)^{-2} =$

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

$$1. -12w^{-2} = \boxed{\frac{-12}{w^2}}$$

$$2. \frac{4^{-2}m^0}{n^{-3}} = \boxed{\frac{n^3}{16}}$$

$$3. c^{-1}d^3x^{-4} = \boxed{\frac{d^3}{cx^4}}$$

$$4. \frac{x^{-3}y^{-4}}{-8z^5} = \boxed{\frac{1}{-8x^3y^4z^5}}$$

$$5. \frac{-10c^{-1}}{5^{-1}e^{-3}} = \frac{-10 \cdot 5 e^3}{c} = \boxed{\frac{-50e^3}{c}}$$

$$6. \frac{6^{-2}h^{-4}j^0m^{-2}}{9^{-1}n^{-3}q^5} = \frac{9n^3}{36h^4m^2g^5}$$

$$= \boxed{\frac{n^3}{4h^4m^2g^5}}$$

$$6. \left(\frac{h^6k^7}{c^3}\right)^{-1} = \boxed{\frac{c^3}{h^6k^7}}$$

$$7. \left(\frac{a^{-4}b^{-2}}{g^5}\right)^{-1} = \left(\frac{1}{a^4b^2g^5}\right)^{-1}$$

$$= \boxed{a^4b^2g^5}$$

Evaluate each expression for $x = -6$ and $y = 4$. Give fractional answers in reduced form (no decimals)

$$8. x^{-2}y = \frac{y}{x^2} = \frac{4}{(-6)^2} = \frac{4}{36} = \boxed{\frac{1}{9}}$$

$$9. -y^{-3} = \frac{1}{-y^3} = \frac{1}{-(4)^3} = \boxed{\frac{1}{-64} \text{ or } -\frac{1}{64}}$$

$$10. 2x^2y^{-2} = \frac{2x^2}{y^2} = \frac{2(-6)^2}{(4)^2} = \frac{2 \cdot 36}{16}$$

$$= \frac{72}{16} = \boxed{\frac{9}{2}}$$

$$11. (2y)^{-2} = \frac{1}{(2y)^2} = \frac{1}{(2 \cdot 4)^2} = \frac{1}{8^2}$$

$$= \boxed{\frac{1}{64}}$$