

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 10D.2 - More Negative and Zero Exponents#1-3, Evaluate each expression for $a = -2$, $b = 3$, $c = -5$.

1. $16a^{-3}c^2$

2. $(-a^0bc^3)^2$

3. $(b^ac^0)^{-1}$

#4-12, Simplify. Answers must not contain zero or negative exponents.

4. $-x^{-3}y^0z^4$

5. $(a^{-3}b^2)^4(-2a^3b^7)^{-3}$

6. $(x^{-3}y^{-1})^{-1}(x^{-3}y^0)^2$

7. $\frac{15q^{-4}}{10p^{-2}q^2}$

8. $\frac{-4b^9b^{-7}}{8b^{-5}b^8}$

$$9. \left[\frac{(-7j^{23}k^{-212}m^{305}n)^{-3}}{(3j^{-38}k^{-110}m^{-108}n^{42})^{11}} \right]^0$$

$$10. \left[\frac{2x^{-3}}{(2x)^3} \right]^{-2}$$

$$11. \left(\frac{3z}{x^{-4}} \right)^2 \left(\frac{3x^{-12}yz^{-3}}{2xy^7} \right)^{-3}$$

$$12. \left[\frac{(a^{-5}b^2)^{-1}}{(-ab^4c^{-1})^2} \right]^{-4}$$