

Name: _____ Show work needed to justify your answer. Date: _____

HW # 44: Algebra 1 - Standard 27 - Division Properties of Exponents

5 points

Simplify each expression. Assume that no denominator equals zero.

1. $\frac{m^4 p^2}{m^2 p} = m^2 p$

2. $\frac{p^{12} t^3 r}{p^2 t r}$
 $p^{10} t^2$

3. $\frac{c^4 d^4 f^3}{c^2 d^4 f^3}$
 c^2

4. $\left(\frac{3xy^4}{5z^2}\right)^2$
 $\frac{9x^2 y^8}{25z^4}$

5. $\left(\frac{p^2 t^7}{10}\right)^3$
 $\frac{p^6 t^{21}}{1000}$

6. $\frac{a^7 b^8 c^8}{a^5 b c^7}$
 $a^2 b^7 c$

7. $\left(\frac{3np^3}{7q^2}\right)^2$
 $\frac{9n^2 p^6}{49q^4}$

8. $\left(\frac{2r^3 t^6}{5u^9}\right)^4$
 $\frac{16r^{12} t^{24}}{625u^{36}}$

9. $\left(\frac{3m^5 r^3}{4p^8}\right)^4$
 $\frac{81m^{20} r^{12}}{256p^{32}}$

10. $\frac{p^{12} t^7 r^2}{p^2 t^7 r}$
 $p^{10} r^1$

11. $\frac{k^4 m^3 p^2}{k^2 m^2}$
 $k^2 m p^2$

12. $\frac{m^7 p^2}{m^3 p^2}$
 m^4

13. $\frac{32x^3 y^2 z^5}{-8xyz^2}$
 $-4x^2 yz^3$

14. $\left(\frac{4p^7}{7r^2}\right)^2$
 $\frac{16p^{14}}{49r^4}$

15. $\frac{9d^7}{3d^6}$
 $3d$