**NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Algebra2CC Mod4\_Lesson 3 HW**

Directions: Show all work in the spaces provided. Simplify each expression completely.

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| 1. $(3a^{2}c^{5})³$ | 2. $(-12p^{2}q^{9})(13p^{5}q)$ | 3. $\left(125r^{12}t^{-15}\right)(4r^{-2}t^{8})$ |
| 4. $(-64u^{9}v^{-12})^{^{2}/\_{3}}$ | 5. $49^{^{1}/\_{2}}- 64^{^{3}/\_{2}}-27^{^{1}/\_{3}}+10^{0}$ | 6. $(-2m^{3}n^{2})^{3} (3m^{5}n)^{4}$ |
| 7. $\frac{(a^{-2}b^{5})}{(a^{7}b^{-1})^{5}}^{-4}$ | 8. $\frac{18p^{2}w^{-4}y^{3}}{-24p^{-5}w^{-1}y^{5}}$ | 9. $(-2x^{2})^{3} (4x^{3})^{-1}$ |
| 10. $\left(\frac{a^{-3}}{b^{-3}}\right)( \frac{a}{b} )^{3}$ | 11. $\frac{(2x^{2})^{^{3}/\_{2}}}{2^{^{1}/\_{2}} x^{4}}$ | 12. $(\frac{-2a^{-2}b^{3}}{3a^{5}b^{2}})^{4}$ |