

Name _____

Date _____

Advanced Algebra

Exponent Rules Quiz #1

Simplify the following Expressions...Do not leave negative exponents

1) $x^2 * x^7$ _____

7) $(4x^2)^3$ _____

2) $7 * b^3 b^7$ _____

8) $\frac{x^4}{x^9}$ _____

3) $(d^4)^3$ _____

9) $\frac{b^{-3} * a^2}{b^4 * a^5}$ _____

4) $(16,125)^0$ _____

10) $(2a)^0$ _____

5) $\frac{a^{12}}{a^4}$ _____

6) $(\frac{3}{2})^{-2}$ _____

Solve the following power functions:

11) $3 + x^3 = 12$

12) $\frac{4x^4 + 28}{3} = 100$

X= _____

x= _____

13) Find the value of x:

$$9^x = 27^{2-2x}$$

A	B	C	D
$\frac{3}{4}$	$\frac{1}{2}$	$\frac{-1}{2}$	$\frac{-3}{4}$

14) Find the value of x:

$$32^{x+1} = 16^{x+2}$$

A	B	C	D
4	2	1	3

15) Solve for x using the change of base method:

$$2^{2x} = 64$$

X= _____