Name: _____ H.W.# 45

Negative & Zero Exponents

No calculator allowed. Show work. Use exponent rules.

Simplify each expression as much as possible. Show needed work below problem.

1.) $(6^2)^0$ = _____ 2.) $\frac{5^{-3}}{5^{-3}}$ = _____ 3.) $\frac{3^8}{3^8} \bullet (1.2)^0$ = _____ 4.) $(-2)^6$ = _____

5.) Which of the following expressions is ***not*** equivalent to $\frac{1}{36}$? Show work.

A) $6^3 \bullet 6^{-5}$ B) $6^{-1} \bullet 6^{-1}$ C) $6^{-3} \bullet 6$ D) $6^{-2} \bullet 6^4$

6.) What is the value of $\frac{(7^{-2})^3}{7^{-4}}$? Show all work. Simplify completely.

Answer:_____

7.) Which expression has the **smallest** value? Show work.

A) 24^0 B) $(-4)(3)$ C) $(2)^{-5}$ D) $(-2)^3$

8.) What number, written in exponential form, can be substituted for *b* in the equation

$7^3 \bullet b = 7^9$ b=_____

Explain how you determined your answer.

_____

_____

Evaluate each expression: Show work.

9.) $(\frac{4}{9})^2$ = _____ 10.) $\frac{4^5 \bullet 5^3 \bullet 6^2}{4^4 \bullet 5^2 \bullet 6}$ = _____