Name: _____ Period: _____

Math 9: Exponents and BEDMAS Quiz

Full credit will only be awarded for all work shown in a neat and organized manner.

1. Evaluate. (If the answer is undefined, answer using $\varnothing$)

   a) -4^4

   b) $-9^0 + (-9)^0$

   c) $(7^0 + 3^1)^0$

   d) $(15^0 - 10^0)^0$

2. The side length for a cube is made 5 times longer. How many times bigger does the volume of the cube become?

3. Fill in a value for the missing power to make the following inequalities true.

   a) $(6)^{10} < (6)^{\square}$

   b) $\left(\frac{3}{4}\right)^5 < \left(\frac{3}{4}\right)^{\square}$

   $\square$ = _____

   $\square$ = _____

   c) $\left(-\frac{6}{5}\right)^4 < \left(-\frac{6}{5}\right)^{\square}$

   d) $(-5)^7 > (-5)^{\square}$

   $\square$ = _____

   $\square$ = _____

4. Simplify. **Show your work.**

a) $16 - 8 \div 4 - 2$

b) $-8 \times 3 - (9 - 7)^2$

b) $\frac{(-6)^2 - 4 + 3}{2^3 + 3 \cdot (2 - 5)}$

d) $\frac{(4-(-2))^2}{3 \times 4 - 6} + [8 + 8 \div 2^2]$

5. Mr. G is trying to solve a BREDMAS problem, but *Mr. G made a mistake in his calculation*. The mistake happened somewhere between step 1 and step 3.

a) **FIND** the mistake Mr. G made and **EXPLAIN** why it is a mistake.
b) Fix the mistake and find the right answer.

$$24 \div [5 + 3 - 2 \cdot (3 - 5)] \cdot 2$$

1) $= 24 \div [5 + 3 - 2 \cdot (-2)] \cdot 2$
2) $= 24 \div [5 + 1 \cdot (-2)] \cdot 2$
3) $= 24 \div [5 + (-2)] \cdot 2$