Corrected

Name: Key Class: _____

Practice - Exponents 2

1) Write each as a single power. Then, evaluate each power.

a) $(3^3)^5 = 3^{3\cdot5} = 3^{15} = 14,348,907$

b) $\left[(-2)^2\right]^2 = (-2)^{2\cdot2} = (-2)^4 = 16$

c) $(6^4)^2 = 6^{4\cdot2} = 6^8 = 1,679,616$

d) $\left((-5)^5\right)^3 = (-5)^{5\cdot3} = (-5)^{15} = -30,517,578,125$

2) Write each as a single power. Then, evaluate each power.

a) $\left(\frac{2}{3}\right)^4 = \frac{2^4}{3^4} = \frac{16}{81}$

b) $\left(-\frac{1}{5}\right)^3 = \frac{(-1)^3}{5^3} = -\frac{1}{125}$

c) $\left(\frac{9}{6}\right)^2 = \frac{9^2}{6^2} = \frac{81}{36} = \frac{9}{4}$ OR $2\frac{1}{4}$

d) $\left(-\frac{5}{3}\right)^6 = \frac{(-5)^6}{3^6} = \frac{15,625}{729}$

3) Write each as a single power. Then, evaluate each power.

a) $(3\times5)^3$ → $3^3\times5^3$ → 27×125 → 3375

b) $\left[4\cdot(-2)\right]^4$ → $4^4\cdot(-2)^4$ → $256\cdot(16)$ → 4096

c) $(6\cdot10)^2$ → $6^2\cdot10^2$ → $36\cdot100$ → 3600

3) Write each as a single power. Then, evaluate each power. Whoops! Same question!

a) $(3\times5)^3$ b) $\left[4\cdot(-2)\right]^4$ c) $(6\cdot10)^2$

3) Evaluate each power.

a) $9^0 = 1$ b) $(-13)^0 = 1$ c) $1,234,567^0 = 1$

Review of Power Laws & Zero Law: ☺ 😐 ☹

Outcome: N2 - Know the exponent laws and be able to use them