Exponents and Powers-1

1. **Fill in the blanks:**
   a. 3^4 means three multiplied by itself four times.
   $3^4 = 3 \times 3 \times 3 \times 3 = 81$
   b. 2^6 means _____ multiplied by itself _____ times.
   $2^6 =$ _____ = _____
   c. 8^2 means _____ multiplied by itself _____ times.
   $8^2 =$ _____ = _____
   d. 4^4 means _____ multiplied by itself _____ times.
   $4^4 =$ _____ = _____
   e. 9^3 means _____ multiplied by itself _____ times.
   $9^3 =$ _____ = _____

2. **Identify the *base* and the *exponent* in the following exponential terms:**
   a. $(\frac{-5}{6})^3$: Base = _____ and Exponent = _____
   b. $(-5)^3$: Base = _____ and Exponent = _____
   c. $(13)^{-4}$: Base = _____ and Exponent = _____
   d. $(5.7)^{-6}$: Base = _____ and Exponent = _____
   e. $(\frac{6}{7})^4$: Base = _____ and Exponent = _____

3. **Write each of the following in the exponential form:**
   a. $x \times x \times x \times y \times y =$ _____
   b. $8 \times 8 \times 8 \times 8 \times 8 \times 8 =$ _____
   c. $(-14) \times (-14) \times (-14) \times z \times z =$ _____
   d. $\frac{-2}{3} \times \frac{-2}{3} \times \frac{-2}{3} \times \frac{-2}{3} =$ _____
   e. $(^-2) \times (^-2) \times (^-2) \times (^-2) \times (^-2) =$ _____

4. **Write each of the following in expanded form:**
   a. $(-10)^2 =$ _____
   b. $(12)^3 =$ _____
   c. $(\frac{-7}{9})^4 =$ _____
   d. $(0.7)^3 =$ _____
   e. $(\frac{4}{5})^7 =$ _____
   f. $(3.4)^6 =$ _____

5. **Complete the following table:**

Exponential Form	Exponent/ Power	Base	Expanded Form	Standard Form
5^4	4	5	5×5×5×5	625
6^3				
$(^-3)^2$				
$^-3^2$				
10^2				
$^-4^3$				
$(^-4)^3$				