Name_____ Per _____

Mrs. Doolan/Math6

2-4 EXPONENTS

Factor - A number that divides another number without remainder
Ex: 6 is a factor of 42

Base - A number multiplied by itself the number of times shown by an exponent

Exponent - A raised number telling how many times another number, the base, is being multiplied by itself

Power - An exponent

Squared - Raised to the power of 2:

EX: 3^2 = 3 squared = 3 x 3 = 9

Cubed - Raised to the power of 3:

EX: 5^3 = 5 cubed = 5 x 5 x 5 = 125

EX: 4^5 = 4 x 4 x 4 x 4 x 4 = 1024

****Base = 4 x 5 Factors of 4**

** Numbers with exponents can be written in three different forms:

1) Exponential Notation: to write the base with an exponent attached.

EX: 9^4

YOU TRY: Write in exponential form:

1) 3 x 3

2) 10 x 10

3) 6 x 6 x 6

2) Expanded Form: to write the multiplication problem out, listing all the factors:

EX: 9 x 9 x 9 x 9

YOU TRY: Write in expanded form:

1) 2^3

2) 7^2

3) 20^4

3) Standard Form: to write the answer with numbers

EX: $16^3 = 16 \times 16 \times 16 =$ **4,096**

YOU TRY: Write in standard form:

1) 3^3

2) $2 \times 2 \times 2 \times 2$

3) 5^3

Directions: Complete the following table. The first two rows have been filled for you to use as a model:

Expanded Notation	Exponential Notation	Standard Notation
2 x 2	2^2	4
5 x 5	5^2	
	3^4	
2 x 5 x 5		
	6^3	
3 x 3 x 3 x 5		
	7^3	
4 x 4 x 4		
	11^2	
	10^3	
2 x 2 x 5 x 7		
	12^3	