

Name: Key  
5<sup>th</sup> Grade Notes 2.3 Powers and Exponents p. 93

-a product of numbers that are the same can be written using an

exponent and a base

-numbers using exponents are called powers

-the exponent tells you how many times the base is used

-the base is the number

Ex: same number repeated (common factors):

$10 \times 10 \times 10 = 10^3$  ← exponent: how many times the base is used  
base listed once

Ex:  $2 \times 2 \times 2 \times 2 \times 2 = 2^5$  ("two to the fifth")

Ex:  $3 \times 3 = 3^2$  ("three squared")

Ex:  $10 \times 10 \times 10 = 10^3$  ("ten cubed")

To solve a number with an exponent, write the base the number of times the exponent says.

Ex:  $4^2 = 4 \times 4 = 16$   
2 times  
base

$3^5 = 3 \times 3 \times 3 \times 3 \times 3 = 243$  (you can use a calculator for solving large numbers)

Note: A dot between two numbers means multiply. This will make your life a lot easier. Ex: 8·9 means 8×9.