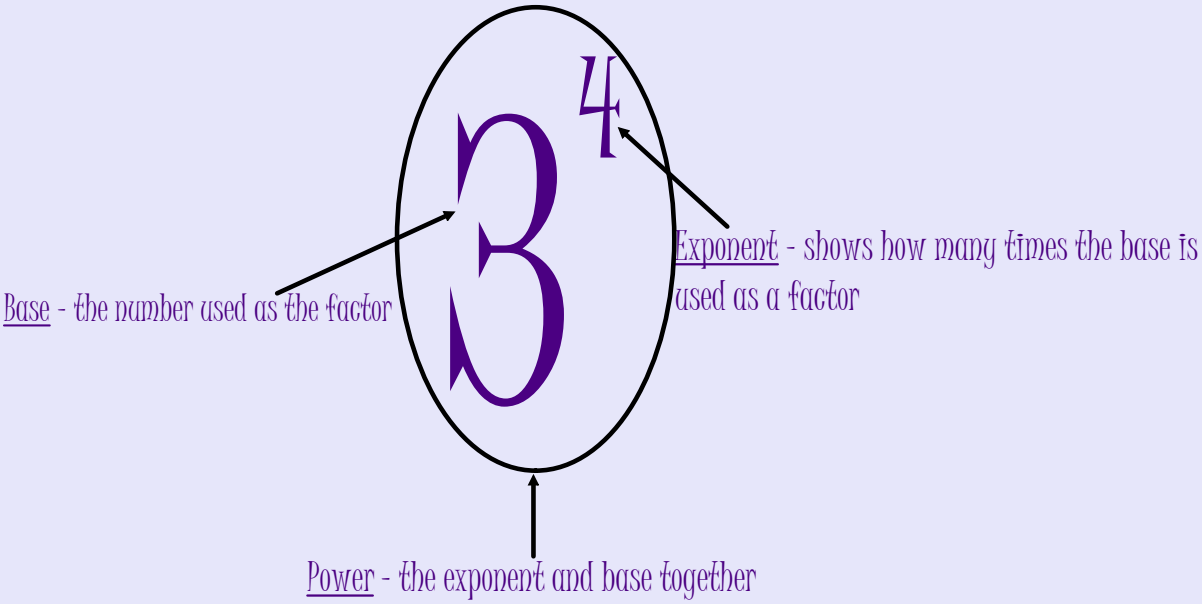
Tuesday, September 16, 2014

Turn your homework in to the tray!!

Multiplying Fractions

# Powers and Exponents

A product of repeated factors can be expressed as a power, that is, using an exponent and a base. Powers show repeated multiplication.




## Reading and Writing Powers

| Read and Write Powers | | |
|---|---|---|
| Power | Words | Factors |
| $3^1$ | 3 to the first power | 3 |
| $3^2$ | 3 to the second power or 3 squared | 3 x 3 |
| $3^3$ | 3 to the third power or 3 cubed | 3 x 3 x 3 |
| $3^4$ | 3 to the fourth power | 3 x 3 x 3 x 3 |
| ⋮ | | ⋮ |
| $3^n$ | 3 to the nth power | 3 x 3 x 3 x ..... x 3 (with n factors) |

# Writing Expressions Using Exponents

Write each expression using exponents.

Ex. 1: $(-2) \cdot (-2) \cdot (-2) \cdot 3 \cdot 3 \cdot 3 \cdot 3$

$(-2)^3 3^4$

Ex. 2: $a \cdot b \cdot b \cdot a \cdot b$

$a^2 b^3$

Ex. 3: $4 \cdot 4 \cdot 4 \cdot 5 \cdot 5$ $4^3 5^2$

# Evaluate Expressions Using Exponents

Example 1: The deck of a skateboard has an area of about $2^5 \times 7$ square inches. What is the area of the skateboard deck?

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 7$

$32 \cdot 7 = 224 in^2$

Example 2: $(a-b)^2$ if $a = 3$ and $b = 5$

$(3-5)^2 = (-2)^2$

$-2 \cdot (-2) = 4$

Example 3: $a^2 + b^4$ if $a = 3$ and $b = 5$

## Homework

WS p. 19 1-10, skip #4