2.1 Variables

Nov. 02, 2006

ie: $x, y, p, q, \alpha, \tau, \Psi, \Delta$, ☺

A symbol representing something else.

Open Sentence: a statement containing a variable

{Solution Set}: the set (one or more than one Ans.) of replacements from the Domain that makes an open sentence true.

ex) find the Solution Set for $x < 5$ if the Domain is W

W : {0, 1, 2, 3, 4, ...}

{0, 1, 2, 3, 4}

Algebraic Expressions:

contains variables + operations: +, −, ·, ÷

Evaluate:

$n+6$ if $n=5$

$(5)+6 = 11$

Evaluate: when $a=3$, $b=7$

$$\frac{a+b}{2} = \frac{(3)+(7)}{2} = \frac{10}{2} = 5$$

* Must Reduce ALL fractions
* No Decimals
* No Mixed #'s $1\frac{1}{2}$ $\frac{3}{2}$ $1\frac{5}{}$

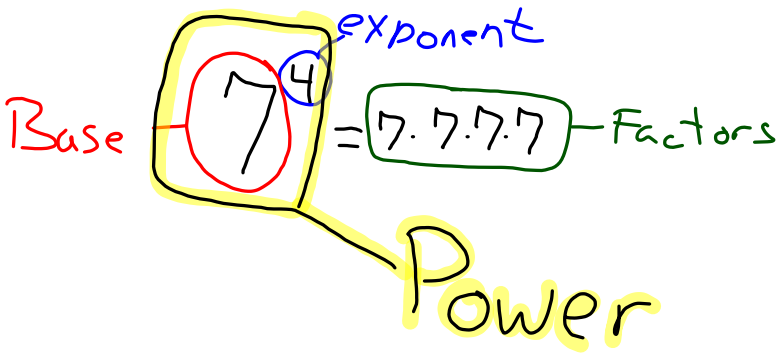
Numbers & Exponents

$7 = 7 = 7^1$

$7 \cdot 7 = 49 = 7^2$

$7 \cdot 7 \cdot 7 = 343 = 7^3$

$7 \cdot 7 \cdot 7 \cdot 7 = 2401 = 7^4$



Write using exponents

ex 1) $8 \cdot 8 \cdot 8 = 8^3 = 512$

ex 2) $x \cdot x \cdot x \cdot x \cdot x = x^5$

ex 3) $2x \cdot 2x \cdot 2x \cdot 2x = (2x)^4$

Evaluate: when $a = 7$, $b = 9$

$a \cdot b = (7)(9)$

$= 63$

Evaluate: when $b = 3$

$5b^4 = 5(3)^4 = 5 \cdot 81 = 405$

O.T.L.

① pg 40: Exp. 1-11 (o)

② pg 40: Exp: 13, 15, 16

③ pg 40: Written: 1-4 F (eoo)

④ Written: 49, 51