Feb 3/2010

Review - Part 2

Algebraic Expressions

Solving Equations

Jan 31-2:27 PM

A variable is a placeholder for some value.

You can think of it like a box that holds some value.
We just use letters of the alphabet because that's
much easier than drawing boxes or jars or bags.

* containers
as
variables

What is 3 📦 $+ 2$ 🪣 $= ?$

$$3(3) + 2(2) = 9 + 4$$
$$= 13$$

Feb 2-9:59 PM

A variable is a placeholder for some value.
To evaluate an expression with variables, substitute
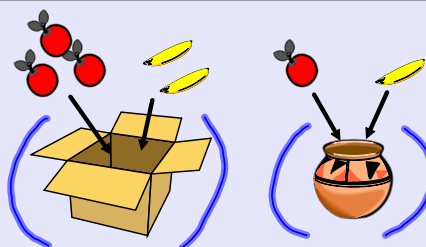a given number in place of the variable.

if x = -2 and y = 3 then

$2x^2 - y$ = $2(-2)^2 - (3)$

$$= 2(-2)(-2) - 3$$

$$= 8 - 3$$

$$= 5$$

$(-2)^2 = -2^2$

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To simplify an expression:
  1. Expand any brackets
  2. Collect <u>like terms</u>

$2($ $) + 3($ $)$

$=(6 \bullet + 4 \diagup)+(3 \bullet + 3 \diagup)$

$=9 \bullet + 7 \diagup$

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To simplify an expression:
1. Expand any brackets
2. Collect <u>like terms</u>

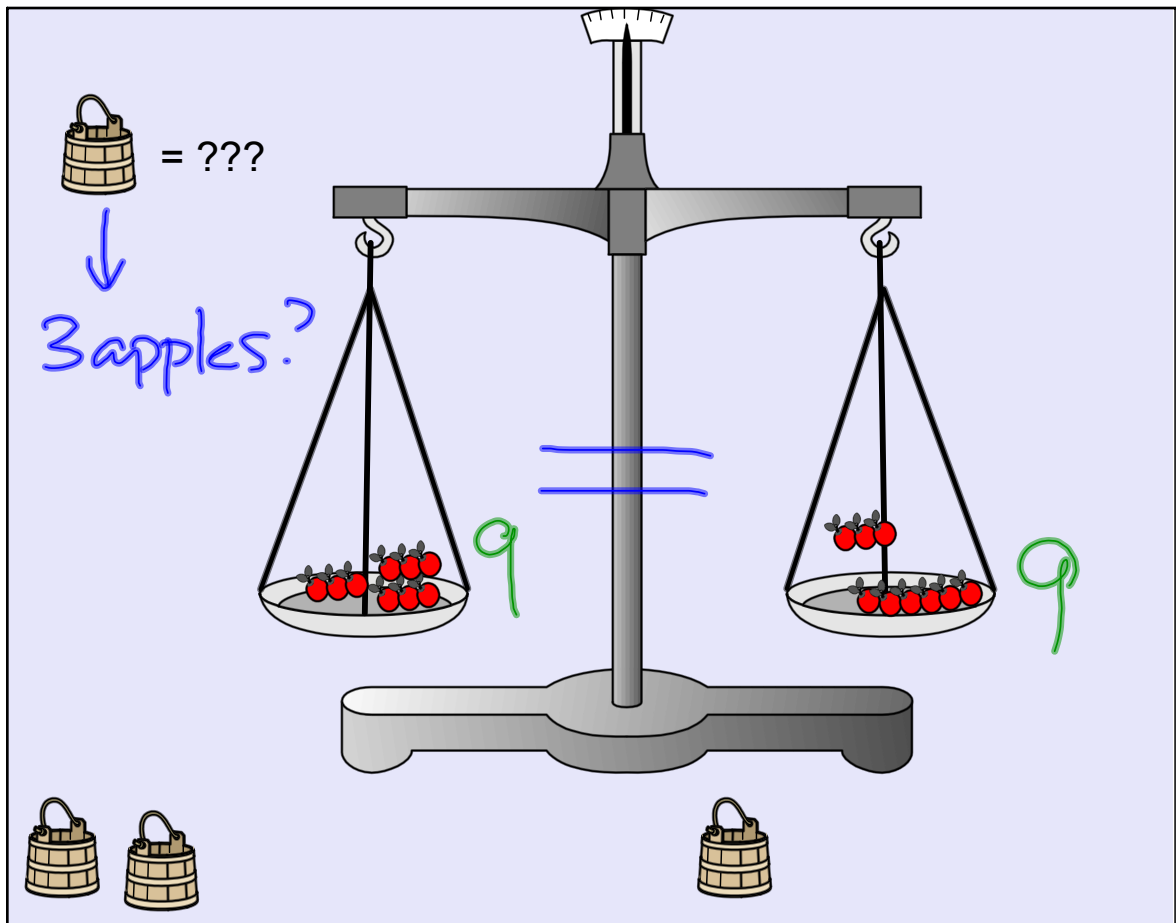① Use the <u>distributive property</u> to multiply a single term into a bracket.

② Like Terms have the same variables, and matching variables have the same exponent.

$2(2x^2 + 3) + 1(-x^2 - 2x) - 5$

$= 4x^2 + 6 - x^2 - 2x - 5$

$= 3x^2 - 2x + 1$

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🪣 = ???

↓

3 apples.?

Weight - beam balance

3

An <u>equation</u> has an <u>expression</u> on each side of an equal sign.

To <u>solve</u> an equation, find the value that makes the left side (LS) equal to the right side (RS). This value is called the <u>solution</u> or <u>root</u> of the equation.

*Isolate the variable *

(a) $2x + 3 = x + 6$

$$-x \quad -3 \quad -x \quad -3$$

$$x = 3$$

(b) $y + 6(y - 3) = 2(3y - 2)$

$$y + 6y - 18 = 6y - 4$$

$$7y - 18 = 6y - 4$$

$$-6y + 18 \quad -6y + 18$$

$$y = 14$$

Feb 2-10:18 PM

Assigned Work:

(odd letters only)
p.19 # 1, 2, 3, 5
p.22 # 4 - 7
p.23 # 1 - 4

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