

What to bring to class:
Ask students to bring PM
4A and 5A.

4.1 - Prealgebra - cont.

- Last time:
- * Letter represents number
 - * Expressions - built by: building expressions
word problems
simplify and rearrange
 - * Build by: Table, Models

Arithmetic with Expressions:

Ex: $m = \#$ of marbles in a bag



Add: $\leftarrow 2m + 1$

$$\begin{aligned} 4m + 3 + 2m + 1 &= 4m + 2m + 3 + 1 && \text{what property?} \\ &= (4 + 2)m + 3 + 1 \\ &= 6m + 3 + 1 \\ &= 6m + 4 \end{aligned}$$

Subtract: Go over PM 6A pg 13 #19

So: separately add terms involving m & those with no m

Say: similar to "add ones & tens separately"

Don't need pictures:

$$\begin{aligned} \underline{4k} + 9 - \underline{3k} + 4 &= (4k - 3k) + (9 + 4) \\ &= (4 - 3)k + 13 \\ &= 1k + 13 \\ &= k + 13 \end{aligned}$$

Call on students to answer questions in 1st column of problem 21 (PM 6A p 13)

* increased complication

* no pictures

Def: An equation is a statement that two expressions are equal.

Ex: $12x - 3 = 33$ can solve

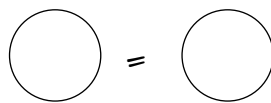
$x^2 + y^2 = 22$ can't solve

Prereq: Meaning of "=" (say: seems obvious but often misunderstood)

* Diagnostic test: $3 + 9 = \underline{\quad} + 8$

common answer 12 for students who think "=" means "compute" NO!

(say: comes from by seeing problems ending in "=")



two sides are the same number.

Teaching Remark: Never "run equality signs"

$$3 \cdot 4 + 8 - 2$$

~~$$3 \cdot 4 = 12 + 8 = 20 - 2 = 18$$~~

Recopy: $3 \cdot 4 + 8 - 2 = 12 + 8 - 2 = 20 - 2 = 18$

Types of Equations

(1) In $x + 3x = 96$

we can solve for x.

(2) $y = t + 3$

cannot be solved, shows relationship between t & y

(3) $4m - m = 3m$

true for all values of m, called identities

Remaining time:

(1) Bargraph activity

(2) Do Mental Math 1 & 2 from HW #16

HW finish HW set 16.

