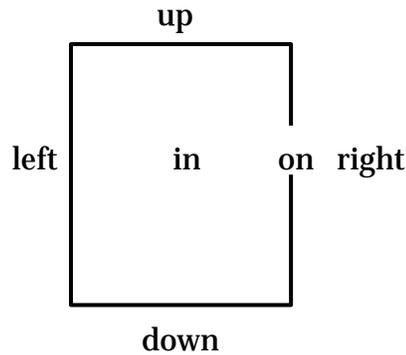


BOX MATH

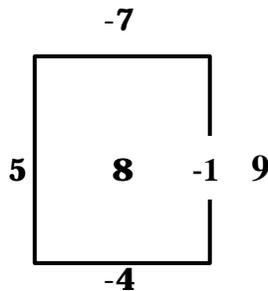
Objectives: Practice integer operations by substitution with words and variables.

Directions:

- On board or overhead draw the following illustration as an example for students:



- Next draw another box with numbers inserted in place of the words. For example:



- Explain to your students that you will give them “directions” such as “up plus left” and they are to add the numbers that are in the place of “up” and “left”. Therefore, -7 has been substituted for “up”, 5 has been substituted for “left”, and the sum is -2 .
- Begin with combinations of two directions – “up + down”, “in+ right”, “on+ in”, “left+ left”, etc.
- Once the students get the idea, move on to more 3, 4, or more combinations – “up+ down+on”, “up+ up+left+in”, etc.
- Directions may also be given for subtraction (such as “down” minus “right”), multiplication and division.
- After order of operations has been taught you may give combinations of operations.
- Also, have the students give you “directions” to find a given number. For example give 12 as the target number. Responses could be “left – up”, “in – down” “in + left + on”, “right + left + on + on”, “(on)(down) + in”.
- Later, the directions in, on, down, up, left, right can be shortened to their first letters – i , o , d , u , l , and r and the students substitute these variable for numbers.

