

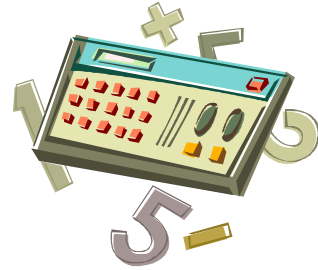
Algebra/Geometry Institute Summer 2004

Lesson Plan 3

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School: Greenville-Wesson High/Greenville Mississippi

Grade Level: 9th



1 Teaching objective(s)

- Solve the linear equations using addition and subtraction.
- Solve the linear equations using multiplication and division.

2 Instructional Activities

1. Identify the set of equations that has been assigned to your group.

Set 1 $n + 5 = +3$ $6 = r - 8$ $+2 + y = +5$ $p - 4 = 5$ $2 = m + 3$	Set 2 $t - 3 = 4$ $7 + w = -5$ $6 + x + 4$ $r - 6 = -8$ $6 = y - 2$
Set 3 $2 = x + 5$ $a + 6 = +2$ $+3 + d = -4$ $m - 2 = 7$ $-7 = z + 2$	Set 4 $-2 = r + 4$ $5 + z = 3$ $-8 + x = -3$ $m + 9 = 6$ $4 = 8 + n$

2. As your teacher calls one of the steps shown below, check each equation in your list to see if it can be solved using that step. If it can, use the step to solve the equation and write the solution next to the equation. The first group to solve all of their equations correctly wins!

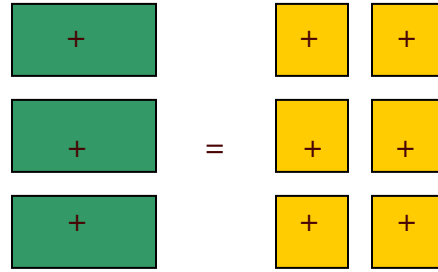
Steps to use on an equation

Add 2 to each side.
Add 3 to each side.
Add 4 to each side.
Add 5 to each side.
Add 6 to each side.
Add 7 to each side.
Add 8 to each side.
Add 9 to each side.

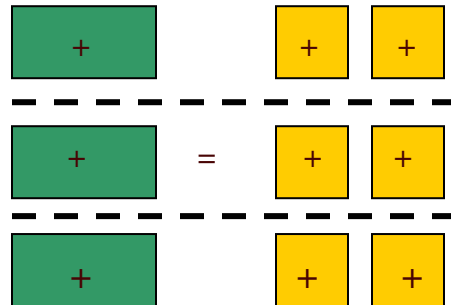
Subtract 2 from each side.
Subtract 3 from each side.
Subtract 4 from each side.
Subtract 5 from each side.
Subtract 6 from each side.
Subtract 7 from each side.
Subtract 8 from each side.
Subtract 9 from each side.

3. You can use algebra tiles to solve an equation like $3x = 6$. Use your algebra tiles to model the steps given below.

- a. Place three x-tiles on the left and six 1-tiles on the right.

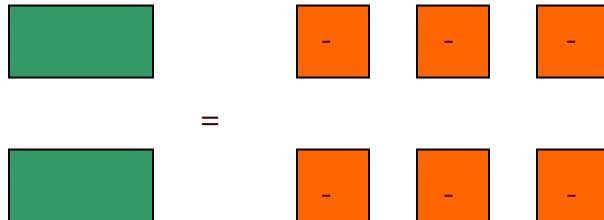


- b. To find the value of x , split the tiles on each side of the equation in thirds to get $x = \underline{\hspace{2cm}}$.



In questions 2 – 4, use algebra tiles to model and solve the equation. The model for the first equation is given.

2. $2x = -6$



3. $4x = 20$

4. $3x = -12$

5. Use the equations you have solved to make a conjecture about solving a multiplication equation.

3 Materials and Resources

McDougal Littell, Algebra 1, Prentice Hall Workbook, Overhead projector.

4

Assessment

Checkpoint Exercises.

1. Solve: $x - 9 = -17$.
2. Solve: $-11 = n - (-2)$.
3. Solve: $5 + x = -3$.
4. Solve: $-3x = 2$.
5. Solve: $x/9 = -25$.
6. Solve: $14 = -7/8n$.