Warm Up - Week 5

(Grab sheet as you come into class)

1. $3x - (2 + 2x) - 4xy + y + x$

$3x - 2 - 2x - 4xy + y + x$

$2x - 2 - 4xy + y$

2. $9(4x - 5) + (3x - 4) - (x + 2x)$

$36x - 45 + 3x - 4 - x - 2x$

$36x - 49$

**If you still need a binder, I have extras on my red chair by the front table*

Homework Questions?

On the top of your paper (by your name) rate yourself for this section:

4 - I can summarize the concepts and explain it to others

3 - I can apply the concept to answer questions correctly

2 - I can apply the concepts but with some mistakes

1 - I need help and know how to apply the concept

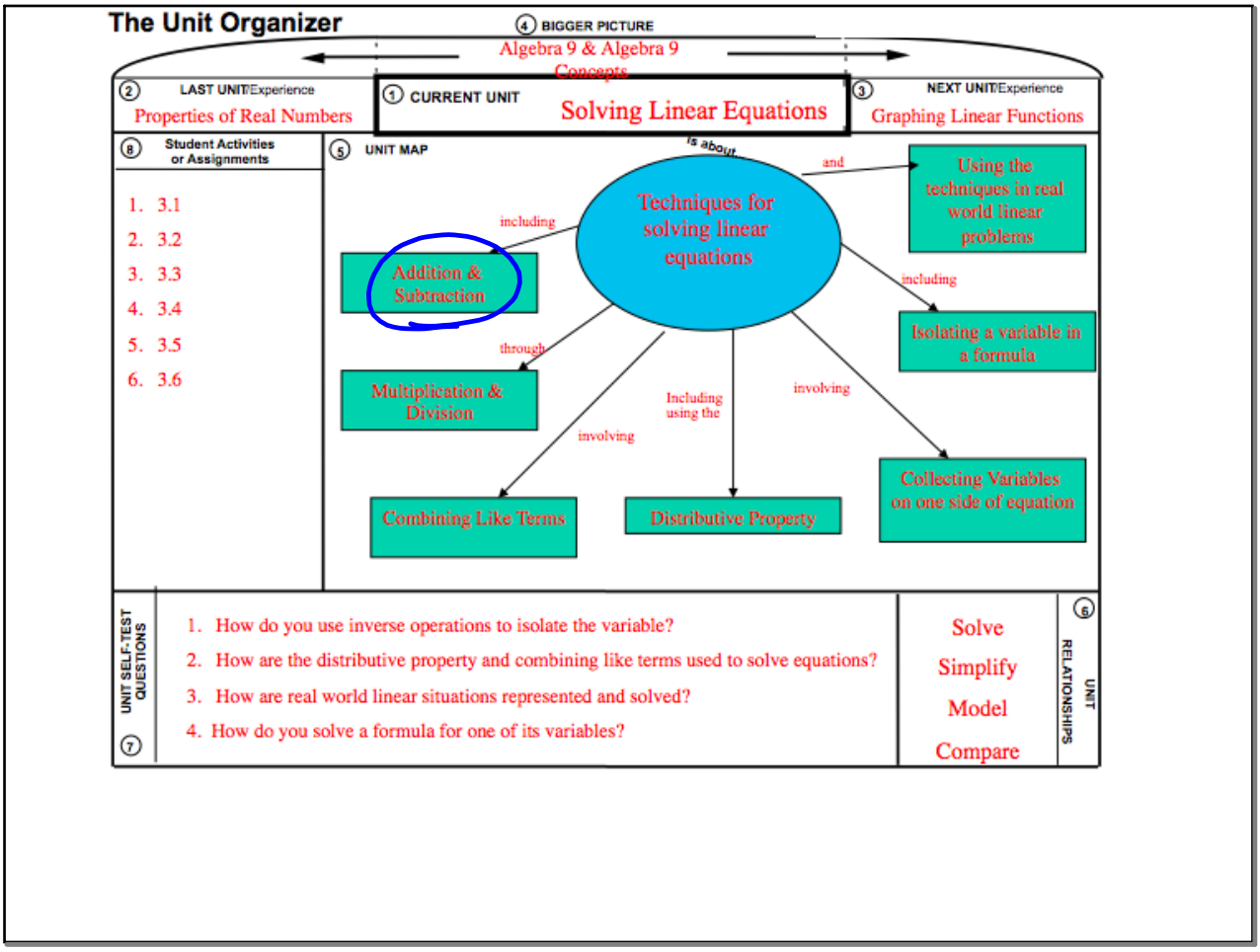
0 - I can't apply the concept, even with help

Rating of 0-2 is a warning signal to me that you need help

3.1 Solving Equations Using Addition & Subtraction

Goals:
- Solve linear equations using addition and subtraction

EQ: Give an example of using inverse operations to solve an equation.



Vocabulary

Equivalent equations:

2 eqns w/ same soln.

Inverse operations:

(opposite) operations that undo each other

+ − × ÷

Linear equation:

straight line graphs ex: $3x^{1}+1$

TRANSFORMING EQUATIONS

OPERATION	ORIGINAL EQUATION		EQUIVALENT EQUATION
• Add the same number to *each* side.	$x - 3 = 5$	Add 3. →	$x = 8$
• Subtract the same number from *each* side.	$x + 6 = 10$	Subtract 6. →	$x = 4$
• Simplify one or both sides.	$x = 8 - 3$	Simplify. →	$x = 5$

+3 +3
X=8
-6 -6
X=4
X=5

Example 1: Add to Each Side of an Equation

Solve x - 9 = -20. This is a subtraction equation. Use the inverse operation of addition to undo the subtraction.

X - 9 = -20
+9 +9
X = -11

-11 - 9 = -20
-20 = -20 ✓

Hint: You can check your solution by substituting your solution for x in the original equation

Example 2: Simplify First

Solve $n + (-8) = -2$

$n + 8 = -2$

$-8 \quad -8$

$n = -10$

Try It

Solve the equation. Check your solution in the original equation.

1. $x - 7 = -15$

$+7 \quad +7$

$x = -8$

$-8 - 7 = -15$

$-15 = -15$ ✓

2. $n + (-6) = 4$

$-6 \quad -6$

$n = -2$

$-2 - -6 = 4$

$4 = 4$ ✓

3. $-7 = 10 + y$

$-10 \quad -10$

$-17 = y$

$-7 = 10 + -17$

$-7 = -7$ ✓

4. $5 - (-z) = 21$

$5 + z = 21$

$-5 \quad -5$

$z = 16$

$5 - -16 = 21$

$21 = 21$ ✓

5. $m + (-3) = 14$

$m + 3 = 14$

$-3 \quad -3$

$m = 11$

$11 - -3 = 14$

$14 = 14$ ✓

6. $-8 = -b + (-2)$

$+2 \quad +2$

$-6 = -b$

$b = 6$

Summary

EQ: Give an example of using inverse operations to solve an equation.

$-8 + x = -11$

$+8 \qquad +8$

$x = -3$

3.1 Homework

wkst
Front side #1-15
(Black Pencil) Back side #11-20
Then Finish Like Terms on wkst (if