Name: $\qquad$

## Homework assignments.

Module 3 Unit 4 - Expressions and Equations Unit 4

| Standard | Description |
| :--- | :--- |
| 7.EE.A.1 | $\rightarrow \quad$Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with <br> rational coefficients. |
| 7.EE.A.2 | Understand that rewriting an expression in different forms in a problem context can shed light on the problem and <br> how the quantities in it are related. |
| 7.EE.B.3 | Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any <br> form using tools strategically. Apply properties of operations to calculate with numbers in any form; convert <br> between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation <br> strategies. |
| 7.EE.B.4 | Use variables to represent quantities in a real-world or mathematical problems, and construct simple equations and <br> inequalities to solve problems by reasoning about the quantities. |


| After FULYS completing a <br> lesson, check the box below. | I can... <br> After completing each lesson, you are on the right track if you can confidently state "I can..." |
| :---: | :--- |
| $\square 4.1$ | Define key vocabulary in mathematical expressions |
| $\square 4.2$ | Combine like terms to create equivalent expressions |
| $\square 4.3$ | Solve one-step equations |
| $\square 4.4$ | Solve one-step equations |
| $\square$ | S.5 |
| $\square$ | Solve one-step inequalities |
| $\square$ | Solve two-step equations |
| $\square$ | Solve two-step equations |
| $\square$ | Solve two-step inequalities |

## Homework is due the following day, but you can always turn it in early!

| The skills and concepts that you learn in this packet will appear as your grade for the standards listed above. |  |
| :--- | :--- |
| A = 4 EXCEEDS | All questions have been attempted and have justification that proves and explains their solution. |
| B = 3 MEETS | Most questions have been attempted and have justification that proves and explains their solution. |
| C = 2 DEVELOPING | Some or all questions are attempted, but does not contain a justification or explanation for the solution. |
| D = 1 WELL BELOW | Few or none of the questions are attempted, and does not contain a justification or explanation for the solution. |

## Dear Students,

I know that math homework can be a DAUNTING task and sometimes it's hard to find the time to complete it. Please know that these assignments have been designed to help support your mathematical thinking-my goal is not to give you busy work. We will use homework to have conversations and practice in class the following day so it is really important that you try to complete it each night. If you need help, email me!

## Independent Practice Lesson 4.1

1. Explain the difference between standard and expanded forms of expressions.
2. What is a "like term"?

Combine Like Terms in these Algebraic Expressions
Remember to Add up Like Terms and Remember the Rules of Adding and Subtracting Rational Numbers

1. $6 x+5+2 y-5 x+3$

Like Terms: $\qquad$
Like Terms: $\qquad$
Like Terms: $\qquad$

Simplified expression
$\qquad$
3. $2+2 \mathrm{~s}+5 \mathrm{x}+2 \mathrm{x}+11 \mathrm{~s}+10$

Like Terms: $\qquad$

Like Terms: $\qquad$
Like Terms: $\qquad$

Simplified expression
2. $x-y+2 x-2+3 y+3+2 y-x$

Like Terms: $\qquad$
Like Terms: $\qquad$
Like Terms: $\qquad$

Simplified expression

What are you struggling with from this lesson?

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## Independent Practice Lesson 4.2

| DIRECTIONS: Create an equivalent expression by <br> either factoring or distributing. | Explain why you chose the property (factoring or <br> distributing) that you used. CIRCLE ONE. |
| :---: | :--- |
| 1. $8(4 \mathrm{x}-12)$ | Ifactored/distributed because... |
| 2. $10 \mathrm{x}+35$ | Ifactored/distributed because... |
| 3. $-2.5(3 \mathrm{x}+8 \mathrm{y})$ | Ifactored/distributed because... |

4. Are factoring and distributing opposite properties? Explain with an example and words.

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## Independent Practice Lesson 4.3

For each of the following problems, solve the equation for the given variable. Show your work for every problem. Credit will only be given if you show your work.

| $-20=\mathrm{k}-7$ | $-105=-5 \mathrm{~g}$ | $-6+\mathrm{h}=12$ |
| :---: | :---: | :---: |
| Check with substitution: | Check with substitution: | Check with substitution: |
| $5+\mathrm{x}=45$ | $7=\frac{b}{11}$ | $-9=\frac{n}{-19}$ |
| Check with substitution: | Check with substitution: |  |

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## Independent Practice Lesson 4.4

For each of the following problems, solve the equation for the given variable. Show your work for every problem. Credit will only be given if you show your work. Check using substitution!

| $23.7+\mathrm{x}=12.9$ | $\frac{1}{4} \mathrm{x}=5$ | $\frac{x}{3.5}=4$ |
| :---: | :---: | :---: |
| Check with substitution: | Check with substitution: | Check with substitution: |
| $\frac{5}{4}=\mathrm{x}-\frac{1}{2}$ | $\frac{x}{3}=\frac{1}{3}$ | $2.4 \mathrm{x}=24$ |
| Check with substitution: | Check with substitution: | Check with substitution: |

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## Independent Practice Lesson 4.5

Directions: Solve, Check and Graph each inequality. Then list possible solutions for the variable.

| Solve \& Check: | Graph: | List Possible Solutions |
| :---: | :---: | :---: |
| 1. $\mathbf{k - 2 0} \leq \mathbf{- 2 1}$ |  |  |
| 2. $\mathbf{3 9} \leq \mathbf{2 1}+\mathbf{p}$ |  |  |
| $\mathbf{3 .} 60<-5 \mathbf{r}$ |  |  |
| $19<\frac{11}{27}$ |  |  |

5. What is different about the solution to an inequality than an equation?
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$\qquad$

| Independent Practice Lesson 4.6 |  |
| :--- | :---: |
| DIRECTIONS: |  |
| 1. Box the variable term | Check your work at the bottom... |
| 2. Isolate the variable term | EXPLAIN \& CORRECT any |
| 3. Isolate the variable | problems you missed here! |

3. Isolate the variable
4. Check your solution
5. $6 \mathrm{x}+8=50$

CHECK:
2. $13=-4 \mathrm{k}+9$

CHECK:
3. $\frac{3}{5} x+22=28$

CHECK:
4. $-10+\frac{7}{4} p=-38$

## CHECK:

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\text { 9I- = d (t) OI =x (\&) I- = Y ( ( }) L=x(\tau): \text { s.ıəMsuV }
$$

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| Independent Practice Lesson 4.7 |  |
| :---: | :---: |
| DIRECTIONS: <br> 5. Box the variable term <br> 6. Isolate the variable term <br> 7. Isolate the variable <br> 8. Check your solution | Check your work at the bottom... EXPLAIN \& CORRECT any problems you missed here! |
| 1. $6.6 \mathrm{x}+2=8.6$ CHECK: |  |
| 2. $\frac{a+8}{9}=\mathbf{3}$ CHECK: |  |
| 3. Create your own two-step equation! | What is a mistake someone would make? |
| 4. Create your own two-step equation! | What is a mistake someone would make? |
| CHECK: |  |

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## Independent Practice Lesson 4.8

DIRECTIONS: Solve the two step inequalities below. Solve, Check, Graph!

1) $2 n+7 \geq 49$
2) $-2 t+13 \geq-21$
3) $59>-7 v+6$

4. Describe what the solutions to inequalities actually mean?
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5. Name five possible solutions for this solution set: $\mathrm{y}<8$.
6. What is the difference between these two solution sets: $a<10$ AND $\quad \mathrm{a} \leq 10$
$\qquad$

Name: $\qquad$ Date:
Score: $\qquad$
Study Guide
Directions: Use the following guiding questions, enduring understandings, vocabulary and models, to make a visual study guide in the box below. Feel free to add information on the back or on a separate sheet of paper.

Unit 4 Study Guide

