Name: $\qquad$

## Homework assignments

Module 1 - The Number System Unit 1, Part 1 - Adding \& Subtracting Integers

| Standard | Description |
| :--- | :--- |
| 7.NS.1 | Apply and extend previous understandings of addition and subtraction to add and subtract rational <br> numbers. <br> $\rightarrow$ |
|  | $\rightarrow$ 1a: Describe situations in which opposite quantities combine to make o. Show that a number and its opposite have a sum of o (are additive inverses). Interpret sums <br> $\rightarrow$ of rational numbers by describing real-world contexts. <br> $\rightarrow$ 1c: Understand subtraction of rational numbers as adding the additive inverse <br> 1d: Apply properties of operations as strategies to add and subtract rational numbers.  |
| 7.NS.3 | Solve real-world and mathematical problems involving the four operations with rational numbers. |


| 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..." |
| :--- | :--- |
|  | 1.1 |$\quad$ I can explore the properties of integers. $\quad$.

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 1.1

1. If math could be a color, it would be $\qquad$ because $\qquad$
$\qquad$
$\qquad$
$\qquad$
2. Draw a model to represent the following situation and then answer the question using the model to justify your answer.

At 7:15am in Boston, MA it is 64 degrees Fahrenheit. By 12:30pm, the temperature has increased by 6 degrees. When the sunsets at 9:10pm, the temperature has decreased by 15 degrees Fahrenheit.

What is the temperature in degrees Fahrenheit when the sun sets?
3. The definition of inverse is as follows: opposite or contrary in position, direction, order, or effect. What do you think would be the inverse of addition? Why?
4. If Nicole runs 400 m and then stops and turns around and runs 600 m , where does she stop? Why? Draw a picture and explain using words and pictures.

## Independent Practice Lesson 1.2

First, solve the following math sentences. Then, make 2 different 3-panel cartoons showing the given math sentence using Floats and Anchors.

Math Sentence: - 2 + $6=$ $\qquad$

| Pictures |  |  |  |
| :---: | :--- | :--- | :--- |
|  |  |  |  |
| Description |  |  |  |

Math Sentence: 4--5 = $\qquad$

| Pictures |  |  |  |
| :---: | :--- | :--- | :--- |
|  |  |  |  |
| Description |  |  |  |

## Independent Practice Lesson 1.3

## The Amazon River Number Line

## Directions:

1) Create a visual representation of the scenario below on the vertical number line provided.
2) Start by labeling the number line by tens from -130 m to +130 m .
3) Then, use your finished number line to help you answer the questions.

## Use the following information to create your number line:

- A hippopotamus is at river water level (floating on the water).
- A flock of birds is 50 m above river water level.
- A school of piranhas is 70 m from the flock of birds.
- The sunken treasure is 110 m below sea level.
- A spear fisherman with a snorkel and spear is swimming 40 m below the school of piranhas.
- The crocodile is the same distance from zero as the birds.

1. Which character(s) is/are exactly 50 meters away from sea level?
2. Which character is a distance of 20 meters from sea level?
3. Write and solve a number sentence that depicts the distance from the piranhas to the hippopotamus.
4. Write and solve a number sentence that depicts the distance from the crocodile to the sea level.

## Independent Practice Lesson 1.4

Part 1: Answer the following questions in complete sentences.

1. Find something that you learned today that is similar to something you already knew. Write about these similarities. Feel free to use visuals and models to help explain. Consider all of the methods that we have used so far to solve problems with integers!
2. How are addition and subtraction connected?

Part 2: Write a number sentence to correspond with the integer story.
Mariah bought 3 cupcakes, but later found out she needed 8 for a party.

Leslie owed Jessica $\$ 3$ for buying her an ice cream sandwich after school. She gave Jessica a $\$ 5$ bill.

Part 3: Solve the following problems using a model, number line or drawing to justify your answer.
$\qquad$
a. $-7+4=$
b. $8--4=$ $\qquad$
c. $8+(-10)-4=$ $\qquad$
d. $2-10-15+5=$ $\qquad$

Part 4: Describe the term absolute value. What is the definition of this term in your own words? How would you show it using a model or a picture? How does it relate to what we have learned?
$\qquad$

## Independent Practice Lesson 1.5

1. $-5+5=$ $\qquad$
2. $-15+15=$ $\qquad$
3. $-1+1=$ $\qquad$
4. $-1,244+1,244=$ $\qquad$
5. Describe any patterns you see in the answers to the problems above. Why do you think this pattern exists?
6. In a trivia game, you earn 15 points for a correct answer and lose 10 points for an incorrect answer.

You start with -45 points and answer the next questions wrong. Which expression describes your new scores?
A. $-45+15$
B. $-45-10$
C. $-45-15$
D. $10-45$
7. Jill and Joe are playing a game. The chart below shows the points gained or lost on each round.

| Round | Jill | Joe |
| :---: | :---: | :---: |
| 1 | 10 | 12 |
| 2 | -2 | 3 |
| 3 | 6 | -8 |
| 4 | 4 | 0 |
| 5 | -2 | 7 |

a. Who has the most total points at the end of the fifth round? $\qquad$
b. To win, a player must have 20 points. How many more points does each player need to win? Jill needs $\qquad$ more points. Joe needs $\qquad$ more points.

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.

## Guiding Questions

- What do negative numbers represent?
- What models can be used to show addition and subtraction of positive and negative integers?
- How can models be used to prove that opposites combine to o?
- What real life situations combine to make o?
- How can a number line model addition or subtraction of integers?


## Enduring Understandings

Integers are useful for noting relative changes or values.
Every numerical operation has an inverse.
Numbers can be expressed in multiple ways.

## Unit 1 Part 1 Study Guide

