Name: _____

Homework Assignments
Module 1 - The Number System Unit 1, Part 2 - Adding & Subtracting Rational Numbers

Standard	Description
7.NS.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers. ➔ 1a: Describe situations in which opposite quantities combine to make 0. ➔ 1b: Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. ➔ 1c: Understand subtraction of rational numbers as adding the additive inverse ➔ 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.

Lesson After FULLY completing a lesson, check the box below.	I can… After completing each lesson, you are on the right track if you can confidently state "I can…"
❏ 1.6	compare and problem solve using rational numbers and integers
❏ 1.7	add and subtract rational numbers
❏ 1.8	solve real-world and mathematical problems involving adding and subtracting rational numbers
❏ 1.9	solve word problems involving changes in distance and temperature

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 1.6

1. _Directions_: Describe each of the following terms (what similarities do they have) and use examples and non-examples for each.

Rational Numbers:

Integers:

Whole Numbers:

2. Change the following improper fractions into mixed numbers.

$$\frac{17}{6} \hspace{4cm} \frac{52}{8} \hspace{4cm} \frac{27}{10}$$

3. Show the following mixed number using words **and** pictures: **1¾**

4. Solve: **219.80075 - 130.9778 =**

Independent Practice Lesson 1.7

1. What value of Y will make this statement true?

$$(-\tfrac{1}{2} - \tfrac{3}{4}) + y = 0$$

2. Solve and explain. Justify your answer in at least one sentence.

$$1.5 + -1\tfrac{3}{4} = \underline{\hspace{2cm}}$$

Justification:

3. Describe this problem using floats and anchors and then solve:

$$-2\tfrac{3}{4} + 1\tfrac{5}{6} = \underline{\hspace{2cm}}$$

4. Solve this problem using a numberline to support your answer:

$$-1\tfrac{2}{3} + 3\tfrac{5}{6} = \underline{\hspace{2cm}}$$

Independent Practice Lesson 1.8

<u>Directions:</u> Show all of your work for each problem and CIRCLE your final answer. Support your answer with words, explanations and diagrams.

1. Kylie spent $12.42 on a new sweater. Sammy paid 80¢ less than the regular price for the sweater. Sammy also paid $2.49 for a bracelet. What is the total amount Sammy paid for these two items? **Show and explain your answer.**

2. Brian went rock climbing over the summer. After climbing up 145 feet above sea level, he climbed down 35.5 feet. He then climbed back up 68 ⅓ feet. What is Brian's current elevation in relation to sea level? **Draw a diagram or model to justify your answer.**

3. On Monday, Brenna rode her bicycle 5 ⅛ miles to the park. On Tuesday, she rode 3.25 miles from her house to the grocery store. How much farther away from Brenna's house is the park than the grocery store (express your answer as a fraction)? **Draw a diagram or write an explanation to justify your answer.**

4. Sarah went scuba diving on Saturday. From sea level, she **descended** 105 ⅓ feet. She then **ascended** 40 ¾ feet where she stopped to view a school of fish.

    What vocabulary do you need to understand within this problem in order to be able to solve it?
    _____   _____

    Describe these terms in your own words:

    NOW, SOLVE THE PROBLEM! Show and explain your work.
    a.   What was Sarah's total distance traveled?

    b.   What is Sarah's current position in relation to sea level?

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Independent Practice Lesson 1.9

Solve each problem in the space below showing ALL WORK. Find your answer in the answer bank provided, and write the letter of your answer on the blank. **Answers without supporting work will receive NO CREDIT.**

1. $3.6 + (-2.4) =$ _____

2. $-\frac{5}{8} - \frac{2}{7} =$ _____

3. $-\frac{9}{2} + \frac{5}{12} =$ _____

4. $-4.125 - (-2.8) =$ _____

5. $-\frac{1}{5} - \left(-\frac{5}{11}\right) =$ _____

6. $-9 - (-12) + 15 =$ _____

7. $\frac{2}{7} - \left(-\frac{1}{8}\right) =$ _____

8. $-\frac{3}{4} - \frac{2}{3} =$ _____

9. $-1 - 18 + (-3) =$ _____

10. $-7 - 4.5 =$ _____

Answer Bank

A. $\frac{23}{56}$

B. $-\frac{17}{12}$

C. $\frac{9}{4}$

D. 18

E. -1.5

F. -22

G. $\frac{14}{55}$

H. 1.2

I. $-\frac{51}{56}$

J. -1.325

K. -11.5

L. $-\frac{49}{12}$

11. A shark is swimming 8.2 feet underwater when it swims up 6.7 feet to dine on a school of fish. At what depth is the school of fish? _____

12. Minnie has 4 ¾ yards of red fleece and Mickey has 2 ½ yards of blue fleece. How much more fleece does Minnie have than Mickey? _____

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Review and 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.

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 0?
- What real life situations combine to make 0?
- 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.

Vocabulary

Change In	Distance	Integer	Rational Numbers	Sum
	Difference	Product	Quotient	Divisor
	Dividend	Absolute Value		

Unit 1 Part 2 Study Guide