The Scholars' Academy

An Accelerated College Preparatory School for Grades 6-12
27Q323, A Teaching and Learning Organization
"Technology Today, Smarter Tomorrow:
Removing Time and Place from Teaching and Learning"
320 Beach 104 Street, Rockaway Park, NY 11694
www.schools.nyc.gov/schoolportals/27/Q323
Tel: (718) 474-6918 Fax: (718) 945-8958

Principal: Brian O' Connell

Assistant Principals:
Toni Marie Sorrentino, Michele Smyth, Scott Milczewski

Welcome to Grade Seven Mathematics
Summer Performance Based Task

Focus Question: What are the real life applications of integers and fractions?

Course: 7th Grade Mathematics

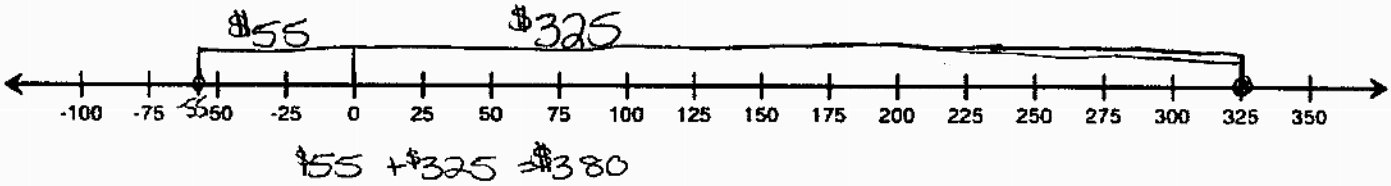
Due Date: September 13th

Key Common Core Standards:

7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.

Task Overview:
In this assignment, you will be considering different real-life applications of negative and positive integers as well as fractions. We are surrounded by math every day but it doesn't always stand out to us. We are asking you to keep your eyes and ears open to different scenarios that occur around you, or that you may read about in a newspaper or online, or even that you may see on television in order to identify real-life occurrences of the use of integers and fractions.

For example: A common real-life occurrence of negative and positive integers is dealing with bank accounts.
A word problem would be: Mr. Smith is a spendthrift and has trouble managing his money over his summer vacation. His bank account on July 1st was $325. Throughout the week he went out to dinner with his friends, shopping, and on a mini-vacation to Hershey Park. At the end of the week he had overdrawn his bank account by $55. How much money did Mr. Smith spend during the week of July 1st?
A number sentence would be: -325 + -55 = -380, representing that he spent his $325 and an additional $55 that he overdrew. So he spent $380 in one week.
A visual representation would be:



Task Steps & Requirements:

- Answer the question dealing with integers and elevation.
- Answer the question dealing with fractions and zoo population.
  - Identify and explain 2 scenarios in which you observed or read about the use of integers over the course of the summer.
- Identify and explain 2 scenarios in which you observed or read about the use of fractions over the course of the summer.
- These scenarios can be something you personally encountered, something you read in the newspaper or on the Internet, or watched on the news or another television show.
  - If it is something you read, please bring in a copy of the reading passage.
  - If it is something you watched on television, please write a brief description of what you watched.
  - If it is something you observed please provide a brief description of the scenario.
- For each situation, describe the dilemma that was faced and how mathematics involving integers or fractions was used to address the dilemma.
- For each situation ***choose 2*** of the following options to fulfill. ***Be sure to use each of the three options at least once.***
  1. Write a number sentence to represent the situation
  2. Create a word problem that is similar but not the same as the dilemma you observed or read.
  3. Create a visual representation of the dilemma and how it could be solved.
- This will count as 15% of your project grade for T1MP1 and is due on September 10th.

Scholars' Academy **Name:**
Date: **Class:**

Integers Question:
Colleen went for a hike this summer in Death Valley, parts of which are at elevations below sea level. She began her hike at an elevation of 300 feet and hiked down 450 feet. At what elevation did she end her hike?
Represent the situation on the number line below.

Fractions Problem:
Brian went to a zoo this summer in which ½ of the zoo is made up of primates. Of the primates, 2/3 of them are monkeys. What fraction of this zoo was made up of monkeys?
Draw a visual representation to demonstrate your response.

Write a number sentence to represent the situation.

Please attach the work and evidence of the 4 scenarios (2 integers and 2 fractions) on a separate sheet of paper.

Scenario 1: Integers
Scenario 2: Integers
Scenario 3: Fractions
Scenario 4: Fractions

For each scenario, provide a description of the dilemma that occurred. Include an overview of the scenario,
Choose 2 of the following options to complete for each scenario: (Be sure to use each option at least once)

1. Write a number sentence to represent the situation
2. Create a word problem that is similar but not the same as the dilemma you observed or read.
3. Create a visual representation of the dilemma and how it could be solved.

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Rubric for Grade 7 Mathematics Summer Performance Based Assessment

Category	Level 4	Level 3	Level 2	Level 1
Integer Problem	The integer question is answered accurately. A full understanding of using a number line to represent the subtraction of integers is demonstrated. The number line is labeled appropriately for the situation.	The question is answered accurately. A partial understanding of using a number line to represent the subtraction of integers is demonstrated. The number line is labeled appropriately for the situation.	A limited understanding of subtracting integers is demonstrated. Either the answer is incorrect or the use of the number line is inappropriate and inaccurate for the given situation.	Limited to no understanding of subtracting integers and modeling integers on a number line is demonstrated. The number line is labeled inappropriately for the situation and does not model the situation.
Fraction Problem	The fraction question is answered accurately. A full understanding of multiplying fractions is demonstrated. The visual representation is accurate and appropriate for the situation. The number sentence is accurate and appropriate for the situation.	The question is answered accurately. A partial understanding of writing a fraction number sentence is demonstrated. OR, A partial understanding of creating a visual representation of multiplying demonstrated.	A limited understanding of multiplying fractions is demonstrated. 2 required components are incorrect or inappropriate for the situation: the answer, the visual representation, or the number sentence.	Limited to no understanding of multiplying fractions, representing it visually, and writing a number sentence is demonstrated.

Integer Connections	Two real-world connections were made to the use of positive and negative integers. The instances were described clearly and have a direct relation to integers.	Two real-world connections were made to the use of positive and negative integers. The description of the instances was unclear or did not have a direct relation to integers.	One real-world connection was made to the use of positive and negative integers. The description of the instance was clear and had a direct relation to integers.	One or two real-world connections were made to the use of positive and negative integers. The description of the instances were unclear and had no direct relation to integers.
Fraction Connections	Two real-world connections were made to the use of fractions. The instances were described clearly and have a direct relation to fractions.	Two real-world connections were made to the use of fractions. The description of the instances was unclear or did not have a direct relation to fractions.	One real-world connection was made to the use of fractions. The description of the instance was clear and had a direct relation to fractions.	One or two real-world connections were made to the use of fractions. The description of the instances were unclear and had no direct relation to fractions.
Number Sentences	A minimum of one number sentence was formed. The number sentences are accurate and appropriate to the situation.	A minimum of one number sentence was formed. A partial understanding of writing number sentences is demonstrated.	A minimum of one number sentence was formed. A limited understanding of writing number sentences is demonstrated.	No number sentences were formed, or the number sentences that were formed were irrelevant.
Word Problems	A minimum of one word problem was created. The word problems are accurate and appropriate to the situation.	A minimum of one word problem was created. A partial understanding of writing word problems is demonstrated.	A minimum of one word problem was created. A limited understanding of writing word problems is demonstrated.	No word problems were created, or the word problems that were created were irrelevant.
Visual Representations	A minimum of one visual representation was formed. The visual representations are accurate and appropriate to the situation.	A minimum of visual representation was created. A partial understanding of creating visual representations is demonstrated.	A minimum of visual representation was created. A limited understanding of creating visual representations is demonstrated.	No visual representations were created, or the visual representation(s) that were formed were irrelevant.

Total Score _____