Math 7
Winter Enrichment Packet

NOTE TO THE STUDENT

*This Winter Enrichment Packet has been compiled to complement middle school mathematics classroom instruction aligned to the Maryland College and Career Ready Standards (MCCRS). The packet is intended to be used for **review and practice** of previously taught and new concepts.*

We strongly encourage you to work diligently to complete the activities for the choice board. You may experience some difficulty with some activities in this packet, but we encourage you to think critically and creatively and complete them to the best of your ability. Upon returning to school, your teacher will discuss the activities with you.
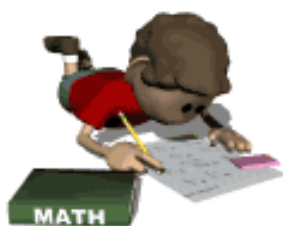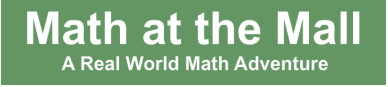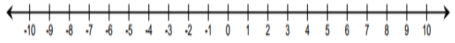
Math 7 Winter Break Choice Board: Trip to Disney World

Your Goal: *TO GET TO DISNEY WORLD FOR A WINTER VACATION!!* Upper Marlboro, Md., is approximately 900 miles from Disney World in Orlando, Florida. You have to select a method of transportation that will total the distance to Orlando.

Choice Board Directions: Choose **one** method of transportation (Plane, Train, or Car) to get to Disney World. You must complete **ALL** 3 of the tasks listed in the column you choose. Each completed assignment will get you **300** miles closer to Orlando.

Plane	Train	Car
Activity 1 Calculate Purchases at a Virtual Mall **Math at the Mall** A Real World Math Adventure	**Activity 4** Solve a Card Puzzle $\dfrac{a}{b} = \dfrac{c}{d}$	**Activity 7** What Is the Unit Price of Gum?
Activity 2 Divide Up Fundraiser Money BOX TOPS FOR EDUCATION	**Activity 5** Figure Out the Gift Card Balance gift card	**Activity 8** Puzzle Time
Activity 3 Create a Video	**Activity 6** Create Number Line Models for Addition Expressions	**Activity 9** Take a Quiz on Scale Drawings Learning Farm

Choice Board Activity Directions

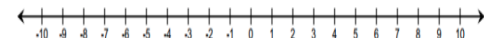|		
Activity 1: Shop at a Virtual Mall **Access the learning app at this link:** http://www.mathplayground.com/ mathatthemall2.html • For each task you complete in the app, you earn a gold coin. • Complete all the tasks to earn four gold coins. • Take a selfie that includes your face (or your name written on a paper or card) and the screen of the computer that shows your four gold coins. Print it out or email it to your teacher.	**Activity 4:** Solve a Card Puzzle 1. Use each number card <u>once</u> to form three proportions. 15 1 2 5 12 10 4 6 16 3 8 20 2. How can you use ratio tables and cross products to solve proportions? Give an example of each.	**Activity 7:** What Is the Unit Price of Gum? **A 20-stick pack of Stride gum costs $1.25** 1. What is the per-stick unit price of Stride gum? Round to the nearest cent if necessary. 2. What is the ratio of sticks of Stride gum to price as a unit rate? 3. Buy a pack of gum in the store and determine its unit rate. Which would be cheaper, Stride or your pack? Show the calculations that gave you the evidence to make your conclusion.
Activity 2: Divide Fundraiser Money The three seventh grade classes at Sunview Middle School collected the most Box Tops for a school fundraiser, and so they won a $600 prize to share among them. Mr. Aceves' class collected 3,760 box tops, Mrs. Baca's class collected 2,301, and Mr. Canyon's class collected 1,855. How should they divide the money so that each class gets the same fraction of the prize money as the fraction of the box tops that they collected? Explain all parts of the process, including showing all work, you used to determine your answer.	**Activity 5:** Determine a Gift Card Balance Jason has $4.20 left on his GameStop gift card that the received a year ago for his birthday. For every month that there is no activity on his GameStop gift card, he is charged a service fee. The change in his balance after the service fee is shown in the table. | Starting Balance	End of Month 1
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$4.20	$3.45 | 1. What will the balance of his gift card be at the end of Month 3? 2. Once the gift card's balance reaches zero, the card is deactivated. After how many months will his gift card be deactivated? Justify your answer.	**Activity 8:** Create Number Line Models Create a number line model for each to represent the equations below. a. $(-2) + 5 =$ ____ b. $(-5) + 2 =$ ____ c. $(-5) + (-2) =$ ____ Use this link for a video and examples: http://tinyurl.com/jo8zo6w
Activity 3: Record a Video Your task is to record a video about *scales, scale factors*, and how to use *proportions* to use a scale to find unknown lengths/distances. The video must be at least 2 minutes in length and It must show examples of a *scale*, a *scale factor* and how to use a proportion to solve for a missing length or distance. Your information and examples should be correct and clearly communicated.	**Activity 6:** Puzzle Time Follow the directions on the 5.4 Puzzle Time page. *Show all work on a separate sheet of notebook paper* for how you determined the unknown value in each proportion. Include the answer to the riddle on your paper.	**Activity 9:** Take a Quiz on Scale Drawings Access the quiz at THIS LINK or http://tinyurl.com/jnfdxfe 1. *Click* **Start Practicing** 2. *Click* **View Lesson** 3. *Click* **Test Mode** When you are finished with the quiz, take a picture of the screen that shows your number correct out of 10. The picture must include your face or your name.

Did You Hear About...

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P	Q	R

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

44 THE
20 BECAUSE
18 IN
16 DAY
3.8 MINUTES
45 SECONDS
9 FOR
5.2 LUNCH
$12\frac{3}{4}$ TIME
$18\frac{3}{4}$ CAFETERIA

Use multiplication to solve the proportion.

A. $\dfrac{m}{8} = \dfrac{3}{4}$

B. $\dfrac{7}{9} = \dfrac{y}{18}$

C. $\dfrac{6}{13} = \dfrac{r}{39}$

D. $\dfrac{g}{48} = \dfrac{11}{12}$

E. $\dfrac{z}{24} = \dfrac{25}{32}$

F. $\dfrac{b}{21} = \dfrac{5}{7}$

G. $\dfrac{11}{27} = \dfrac{n}{18}$

H. $\dfrac{9}{28} = \dfrac{s}{42}$

Use the Cross Products Property to solve the proportion.

I. $\dfrac{c}{12} = \dfrac{5}{3}$

J. $\dfrac{9}{4} = \dfrac{x}{16}$

K. $\dfrac{7}{8} = \dfrac{14}{p}$

L. $\dfrac{12}{7} = \dfrac{36}{n}$

M. $\dfrac{k}{20} = \dfrac{13}{50}$

N. $\dfrac{15}{a} = \dfrac{25}{14}$

O. $\dfrac{6.6}{1.2} = \dfrac{w}{4.2}$

P. $\dfrac{1.6}{3.2} = \dfrac{2.8}{t}$

Q. $\dfrac{5}{\$13.75} = \dfrac{p}{\$24.75}$

R. $\dfrac{230 \text{ cal}}{30 \text{ min}} = \dfrac{345 \text{ cal}}{x \text{ min}}$

36 EVERY
14 CLOCK
5.6 BACK
15 THAT
6 THE
21 AT
23.1 WENT
8.4 IT
$13\frac{1}{2}$ SLOW
$7\frac{1}{3}$ WAS

Winter Break Choice Board Score Sheet

Plane

	Points Possible	Points Earned
Name: _____		
Assignments		
Activity 1: Math at the Mall	4	
Activity 2: Divide up fundraiser money	4	
Activity 3: Take notes from watching a video	4	
Total Points	12	

Teacher Comments:

_____

_____

Train

	Points Possible	Points Earned
Name: _____		
Assignments		
Activity 4: Card Puzzle	4	
Activity 5: Figure out the gift card balance	4	
Activity 6: Play a computer game	4	
Total Points	12	

Teacher Comments:

_____

_____

Car

	Points Possible	Points Earned
Name: _____		
Assignments		
Activity 7: Real-World Problem: Unit price of gum	4	
Activity 8: Adding Integers	4	
Activity 9: Quiz on scale drawings	4	
Total Points	12	

Teacher Comments:

_____

_____

RUBRICS AND ANSWER KEYS

Activity 1

4	3	2	1
Student submits photo, including his/her face or name, that shows 4 stars were earned.	Student submits photo, including his/her face or name, that shows 3 stars were earned.	Student submits photo, including his/her face or name, that shows 2 stars were earned.	Student does not submit evidence that the activity was attempted and at least two stars were earned.

Activity 2

4	3	2	1
Student shows all parts of the process he/she used to determine the correct answer to the problem.	Student shows all parts of the process he/she used to determine the answer, but there is 1 error in calculation or process.	Student shows all parts of the process he/she used to determine the answer, but there are 2 errors in his/her calculation or process.	Student does not show all parts of the process he/she used to determine the answer, and/or there are more than 2 errors in his/her calculation or process.

Activity 3

4	3	2	1
Student submits video that is at least 2 minutes in length. Examples included of scales, scale factors, and using proportions to find a missing length or distance. The information and examples are correct and clearly communicated.	Student submits video that is at least 2 minutes in length. Examples included of scales, scale factors, and using proportions to find a missing length or distance. The information and examples are correct and clearly communicated.	Student submits video that is at least 1:30 in length. Examples only include 2 of scales, scale factors, or using proportions to find a missing length or distance. The information and examples are either not correct or not clearly communicated.	Student's video is less than 1:30 in length. 2 or fewer examples are either not correct or not clearly communicated.

Activity 4

4	3	2	1
Student uses each number card <u>once</u> to form three proportions. Student explains or gives examples of how to use ratio tables *and* cross products to solve proportions.	Student completes the activity with 1-2 errors in the proportions and/or examples/ explanations.	Student completes the activity with 3-4 errors in the proportions and/or examples/ explanations.	Student's work is mostly incomplete or inaccurate.

Activity 5

4	3	2	1
Student answers Question 1 correctly and justifies with sound reasoning his/her answer for Question 2.	Student answers Questions 1 and 2 correctly but has errors in reasoning or calculation or missing justification.	Student answers either Question 1 or 2 incorrectly and has errors in reasoning or calculation or missing justification.	Student's work is mostly incomplete or inaccurate.

Activity 6

4	3	2	1
Student creates accurate number lines and represents each of the addition expressions on the number lines correctly.	Student creates accurate number lines and represents only 2 of the addition expressions on the number lines correctly.	Student does not create accurate number lines OR represents only 1 of the addition expressions on the number lines correctly.	Student's work is mostly incomplete or inaccurate.

Activity 7

4	3	2	1
Student submits work that shows: 1. The per-stick price of Stride gum is $0.06 2. The ratio of sticks of gum to price is 16 sticks per 1 dollar. 3. Student shows complete unit rate calculation of her/his chosen pack of gum	1 of the items from Box 4 is incomplete or one of the calculations is not accurate.	2 of the items or calculations from Box 4 are incomplete or not accurate.	Student's work is mostly incomplete or inaccurate.

Activity 8

4	3	2	1
Student solves each of the 18 proportions and shows the process (work) for each solution. Student writes solution to the riddle: *The Clock In The Cafeteria That Was Slow Because Every Day At Lunch It Went Back For Seconds*	Student solves each of the 18 proportions. The process (work) for 1-3 solutions are incorrect or not shown. Student writes solution to the riddle.	Student solves at least 14 of the 18 proportions. The process (work) for 1-3 solutions are incorrect or not shown.	Student's work is mostly incomplete or inaccurate.

Activity 9

4	3	2	1
Student submits a picture with his/her name or face next to the screen showing that he/she has completed 10 problems with 9-10 correct.	Student submits a picture with his/her name or face next to the screen showing that he/she has completed 10 problems with 6-8 correct.	Student submits a picture with his/her name or face next to the screen showing that he/she has completed 10 problems with 4-5 correct.	Student showed evidence of working on the quiz but had less than 4 problems correct.