Name: _____

Rising 8th grade Summer Math Packet

Summer Math Activities 2017

Dear Student / Parent / Guardian:

The websites and problems are designed to allow you to practice your math skills throughout the summer in a fun way! Your assignment is to:

- Use the websites below to practice the math and record it on your Website Log sheet. Remember, you need to log AT LEAST 10 minutes once a week on at least 10 of the sites listed.
- Solve the problems in the grade level packet. You may print the packet or solve it on a sheet of paper and label each page. (packet is located on the McClintock Website www.mcclintockscots.com)

Your teacher will collect your website log and packet of problems by **September 15, 2017.**

Math Practice Sites The following websites are designed to allow you to practice your math skills throughout the summer in a fun way!

https://www.funbrain.com/math-zone : Games are listed by grade level

http://www.AAAmath.com Interactive Math Activities are listed by grade level

http://www.missmaggie.org/maggies-games/ "Around the World in 80 Seconds"

www.Brainpop.com/math Try a quiz and extra practice

http://www.arcademics.com Lots of great interactive math games

http://www.aplusmath.com Games and Flashcards

http://www.brainormous.com/ Problem solving and math games

http://www.allmath.com/flashcards.php Flash cards for all basic operations

http://www.mathplayground.com/index.html More math games

http://www.rsinnovative.com/rulergame/ Start off with 1inch

https://www.prodigygame.com/ Sign up for a free account. Role playing math game for grades 1-8

http://quizlet.com Practice vocabulary

http://www.kahnacademy.com Practice different math concepts

www.mathforum.org/dr.math Can be used to help answer a math problem

www.webmath.com Math problem solver

You can always choose a different online math game; just make sure it's a FREE game!

Name: _____

Rising 8th grade Summer Math Packet

Summer Math

Summer Math Website Activities Log:

Date	Website Name/Activity	Time Spent	Explain What You Did

Please use the WEBSITE LOG to document what sites you've visited and how long you've spent practicing your math skills and concepts. Remember, you need to log AT LEAST 10 minutes once a week on at least 10 of the sites listed.

Name: _____

Rising 8th grade Summer Math Packet

Expressions and Equations

It's Party Time

The Murphy's love to have parties. Last Friday, they gave a party and the doorbell rang 15 times. At the first ring, one guest arrived. Each time the doorbell rang after that, two more guests arrived than the time before.

On Saturday they had another party. At the first ring of the doorbell a single guest arrived, at the second ring two guests appeared, at the third ring three guests and so on.

- If the doorbell rang 20 times Saturday night, how many guests attended?
- Was this party bigger than Friday's? How do you know?
- Write an equation for each night and solve.

Name: _____

Rising 8th grade Summer Math Packet

Batter Up!

Below is a table showing the number of hits and the number of times at bat for two Major League Baseball players during two different seasons:

Season	Derek Jeter	David Justice
1995	12 hits in 48 at bats	104 hits in 411 at bats
1996	183 hits in 582 at bats	45 hits in 140 at bats

A player's *batting average* is the fraction of times at bat when the player gets a hit.

a. For each season, find the players' batting averages. Who has the better batting average?

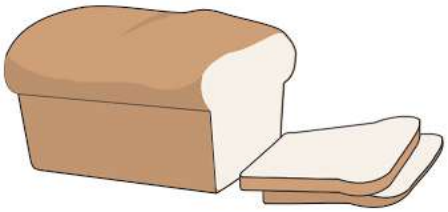
b. For the combined 1995 and 1996 seasons, find the players' batting averages. Who has the better batting average?

c. Are the answers to (a) and (b) consistent? Explain.

Name: _____

Rising 8th grade Summer Math Packet

Ratios and Proportions



Task

Inflation is a term used to describe how prices rise over time. The rise in prices is in relation to the amount of money you have. The table below shows the rise in the price of bread over time:

YEAR	Cost of 1 lb. of Bread	Percent Increase
1930	$0.09	N/A
1940	$0.10	
1950	$0.12	
1960	$0.23	
1970	$0.25	
1980	$0.50	
1990	$0.75	
2000	$1.99	
2010	$2.99	

For the price in each decade, determine what the increase is as a percent of the price in the previous decade. Is the percent increase steady over time?

Name: _____

Rising 8th grade Summer Math Packet

Under President Roosevelt, the Fair Labor Standards Act introduced the nation's first minimum wage of $0.25 an hour in 1938. The table shows the rise in minimum wage over time:

http://www.census.gov/compendia/statab/2012/tables/12s0652.pdf))

YEAR	Federal Minimum Wage	Percent Increase
1930	None	N/A
1940	$0.30	N/A
1950	$0.75	
1960	$1.00	
1970	$1.60	
1980	$3.10	
1990	$3.80	
2000	$5.15	
2010	$7.25	

For hourly wage in each decade, determine what the increase is as a percent of the hourly wage in the previous decade. Is the percent increase steady over time?

Name: _____

Rising 8th grade Summer Math Packet

Art Class

Directions: Solve the following problems.

The students in Ms. Baca's art class were mixing yellow and blue paint. She told them that two mixtures will be the same shade of green if the blue and yellow paint are in the same ratio.
The table below shows the different mixtures of paint that the students made.

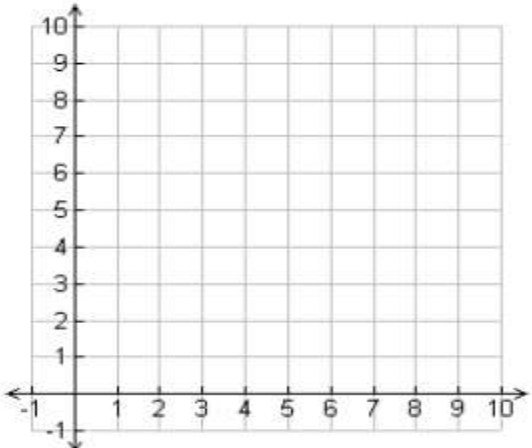
	A	B	C	D	E
Yellow	1 part	2 parts	3 parts	4 parts	6 parts
Blue	2 part	3 parts	6 parts	6 parts	9 parts

a. How many different shades of paint did the students make?

b. Some of the shades of paint were bluer than the others. Which mixture(s) was the bluest? How do you know?

c. Graph a point for each mixture on the grid below. Don't forget to add a title and labels for each axis.

d. Draw lines connecting the origin (0, 0) with each point separately (HINT: You'll have at least two lines from the origin.)



Name: _____

Rising 8th grade Summer Math Packet

The Number System

Find three different ways to fill in operations in the boxes below to make the equations true.

$6 \square 1 \square 2 \square 2 = 5$ *Hint: Operations include: +, -, x, ÷,()

$6 \square 1 \square 2 \square 2 = 5$

$6 \square 1 \square 2 \square 2 = 5$

Digging a wall

A water well drilling rig has dug to a height of -60 feet after one full day of continuous use.

a. Assuming the rig drilled at a constant rate, what was the height of the drill after 15 hours?

b. If the rig has been running constantly and is currently at a height of -143.6 feet, for how long has the rig been running?

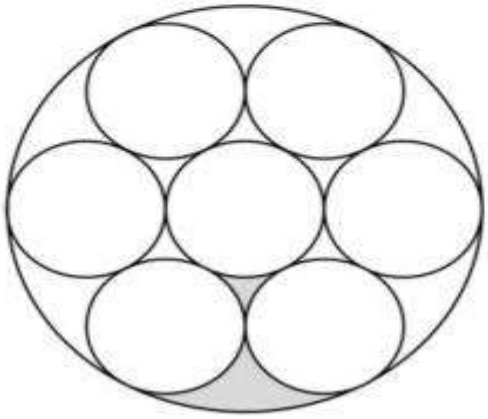
Name: _____

Rising 8th grade Summer Math Packet

Geometry

Round and Round

The figure below is composed of eight circles. Neighboring circles only share one point, and two regions between the smaller circles have been shaded. **Each small circle has a radius of 5 cm.**



Calculate:

1. What is area of the large circle? (Area = πr^2)

2. What is the total area of the small circles?

3. Find the difference between the area of the large circle and the sum of the area of the smaller circles.

4. Find the area of the shaded region. (HINT: We're dividing the answer to number 3 into equal parts. How many equal parts are there?)

Name: _____

Rising 8th grade Summer Math Packet

Functions

Party

This problem gives you the chance to:
- choose and use number operations in context
- find and use an algebraic formula
- relate formulae and graphs

Sarah is organizing a party at the Vine House Hotel.

Vine House Hotel
Your fab party place!

Charges
$750 for up to 30 people
plus
$20 per person for each extra person

1. Sarah thinks there will be 60 people at the party. Show that the cost will be $1350

2. What is the cost of a party for 100 people at the Vine House Hotel?
   (Show how you figured it out below)

3. C dollars is the cost of a party for P people. Write an equation for the cost of P people.

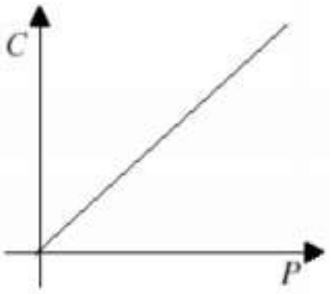
Name: _____

Rising 8th grade Summer Math Packet

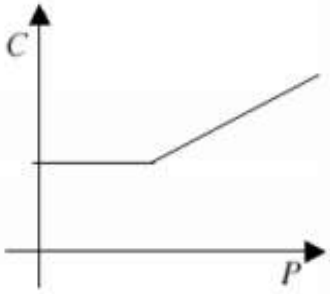
4. Sarah's party cost $1750 in all. How many people came to the party?

5. Which of these graphs shows the connection between the number of people at the party, P, and the cost, $C? Graph _____

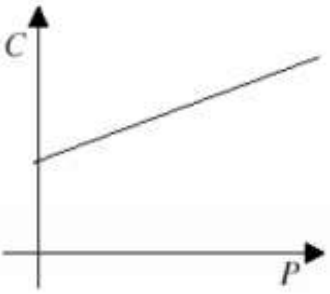
Graph 1



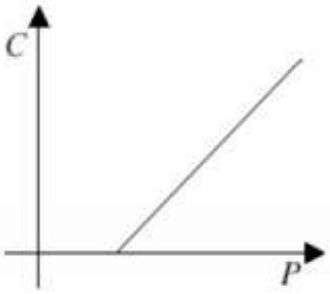
Graph 2



Graph 3



Graph 4



Explain how you know

_____

_____

_____

_____