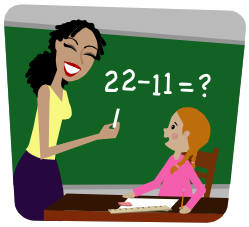


Teaneck Public Schools

AMS 6 Summer Assignment

The purpose of the summer assignment is to help you maintain the math skills you have studied thus far. There are two parts to this assignment:

Part 1: Skill reinforcement.
This portion of the summer assignment should be completed over the course of several days, not in one day. Show your work beside or below each of the problems. Be sure to write your answers on the line provided. Use the space provided in the packet to answer all Extended Constructed Response Questions.

Part 2: My Summer Daze Project.
Read the directions carefully for the My Summer Daze Project. Use the organizer to keep track of your information. You are responsible for handing in the organizer along with the other required parts of the project. A rubric is included for your reference. It tells you how the project will be graded.

Assignment Policies:

- **Your project is due on *the first day of school*.** If it is not handed in, your teacher will call your parents/guardians to let them know that it is due.
- **Late projects will lose 10 points a day.** Students who arrive without their work done will still be expected to complete the work and will be given another summer assignment packet.
- Students who are new to the district will be expected to complete this work and will be given a packet and project. They will be given seven days to complete this packet without points being taken off.

How to support your child:

- Set up a schedule with your child to break the assignment into manageable parts throughout the summer.
- Monitor your child's progress on a weekly basis.

STUDENT RESPONSIBILITIES:

- All students are responsible for completing the summer assignment.
- Be sure to put the assignment in a safe place so you will not lose it.
- Attempt to answer every question. Leave nothing blank.
- **Calculators may not be used.** You must show all of your math work in pencil. Answers should be in lowest terms.
- If you need help, ask your parent/guardian to use the math websites listed below.
- **Turn in your completed summer packet to your 6th grade math teacher on the first day of school. Late projects will lose 10 points a day.**

I understand the summer assignment expectations and policies.

STUDENT SIGNATURE:_____

PARENT SIGNATURE: _____

Need assistance? Check out these websites!

http://www.aplusmath.com/

http://www.amathsdictionaryforkids.com/

http://mathforum.org/dr.math/

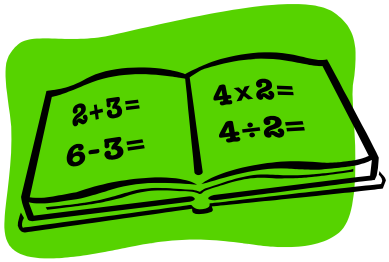
http://math.com/

Teachertube.com

http://www.math-drills.com/

https://www.khanacademy.org/

Good Luck and see you in September!



Day 1

1) Arrange the numbers from smallest to largest.

$$\frac{9}{4}, 2\frac{1}{12}, 2\frac{1}{2}, \frac{12}{11}$$

_____

2) Which is longer, 17 months or $1\frac{2}{3}$ years?

_____

3) Compare using > , < , or =. $4\frac{1}{2}$ ___ $\frac{42}{4}$

_____

4) Express 45 minutes as a fraction of 1 hour in lowest terms.

_____

5) 27,000 + 9,000 = ?

_____

6) 800 × 2 = ?

_____

7) Round 245,230 to the nearest thousand.

_____

8) Which of the following is not equivalent to $\frac{4}{7}$?

$$\frac{8}{14} \quad \frac{12}{21} \quad \frac{20}{42} \quad \frac{28}{29}$$

_____

9) $\frac{3}{5} = \frac{3+18}{10+?}$

_____

10) Grace is 9 years old and Ruth is 6 years older than Grace. Express Ruth's age as a fraction of their total age in lowest terms.

_____

Day 1 (continued)

Complete the table.

Fraction	Decimal	Percent
11)	**12)**	50%
13)	.1	**14)**
$\frac{1}{4}$	**15)**	**16)**

Solve. Show your work and box your answers. Put all fractions in lowest terms.

17) $\frac{3}{4}+\frac{1}{8}$

18) $\frac{9}{10}-\frac{3}{4}$

19) $3\frac{7}{8}-1\frac{1}{2}$

20) $21+6\div 3\times(11-4)$

Day 2

Helpful Tip! When subtracting mixed numbers, turn the mixed number into an improper fraction
Example:

$3\frac{3}{4}$ Multiply the denominator and the whole number **4 x 3 =12**
Then add that product to the numerator **12 +3= 15**

Lastly put that number over the denominator $\frac{15}{4}$

1) Which of the following is nearest to 4?
$3\frac{1}{8}, 3\frac{11}{12}, 4\frac{9}{10}, 4\frac{4}{5}$ _____

2) Compare using > , < , or =. $3\frac{1}{7}$ ___ $\frac{31}{7}$ _____

3) 500 × 4 = ? _____

4) 53,000 – 4000 = ? _____

5) Round 43,192 to the nearest 10. _____

6) Mr. Math had $75. He kept $35 for himself and split the rest equally among his son and daughter. How much did each child get? _____

7) Andrew has 7 boxes of cake. 3 of the boxes have 8 pieces each. The other 4 boxes have 40 pieces altogether. How many pieces of cake are there in the 7 boxes? _____

Solve. Show your work and box your answers. Put all fractions in lowest terms.

8) $4\frac{1}{4} - 1\frac{5}{12}$

9) $2\frac{2}{3} + 2\frac{5}{12}$

10) 3048 ÷ 24

Day 3

Helpful Tip! Order of Operations. **P.E.M.D.A.S.**
Solve anything in **P**arentheses first
Then **E**xponents
Then solve **M**ultiplication or **D**ivision (from left to right)
Then **A**dd or **S**ubtract (from left to right)

1) 1800 ÷ 6 = ? _____

2) Round 14,563 to the nearest hundred. _____

3) Estimate. $357 \times 132 \approx ?$ _____

4) $93 \times 100 = ?$ _____

5) Write $\frac{7}{2}$ as a mixed number. _____

6) Write $4\frac{2}{3}$ as an improper fraction. _____

7) Lily used $2\frac{7}{8}$ quarts of paint for her room and she still had $5\frac{3}{8}$ quarts of paint left. How much paint did she have at first? _____

Solve. Show your work and box your answers. Put all fractions in lowest terms.

8) $(30 - 3) \div 9 + 34$

9) $5 \times (10 - 6) + 49 \div 7$

10) $3 \times 3 - 45 \div (4 + 1)$

Day 4

Helpful Tip: The GCF is the Greatest Common Factor. To find the GCF of two numbers first list all their factors, then determine what the greatest factor is that they both share.

Example 20, 10 Factors of 20: 1, 2, 4, 5, 10, 20 Factors of 10: 1, 2, 5, 10

10 is the largest factor that they have in common!

1) Compare using > , < , or =. $\frac{34}{8}$ ___ $4\frac{1}{4}$ _____

2) 8000 + 5000 = ? _____

3) How many sevenths are there in $3\frac{5}{7}$? _____

4) Estimate. $1488 \div 13 \approx ?$ _____

5) $900 \div 30 = ?$ _____

6) Write the first 5 multiples of 8. _____

7) What is the GCF of 12 and 20? _____

8) I am between 15 and 25. I am a multiple of 5. I am a factor of 40. What number am I? _____

9) Write $9\frac{2}{11}$ as an improper fraction. _____

10) Rick read $\frac{1}{3}$ of his summer reading book over the weekend and $\frac{1}{6}$ on Tuesday. What fraction of the book did he have left to read? _____

Day 4(continued)

Complete the table.

Fraction	Decimal	Percent
11)	**12)**	100%
13)	.75	**14)**
$\frac{7}{10}$	**15)**	**16)**

Solve. Show your work and box your answers. Put all fractions in lowest terms.

17) $4\frac{3}{10} - 3\frac{5}{6}$

18) $5 \times (36 + 14 - 3 \times 6) \div 8$

19) 385×37

20) $1513 \div 17$

Day 5

Helpful Tip! Prime Numbers are numbers that only have 1 and the number itself as a factor. In other words, there are no numbers that divide evenly into the number except for 1 and itself.

Example: **5**, has no numbers other than 1 and 5 divide evenly into 5.

12: is <u>not prime</u>! The numbers 1, 2, 3, 4, 6, and 12 can all divide evenly into 12.

LCM stands for the **L**east **C**ommon **M**ultiple.

To determine the LCM of two numbers you can list their multiples and find the first (smallest) one that they share

Example: 6 and 8 Multiples of **6**: 6, 12, 18, **<u>24</u>**, 30, 36 Multiples of **8**: 8, 16, **<u>24,</u>** 32, 40…

<u>24</u> is the first multiple that 6 and 8 share so it's the LCM!

1) 6000 – 2000 = ? _____

2) What is the LCM of 9 and 12? _____

3) List the prime numbers from 0 -20. _____

4) Write $\frac{19}{6}$ as a mixed number. _____

5) A gallon of milk was poured equally into 9 glasses. How many cups are in each glass? Give your answer as a mixed number. _____

6) Order from smallest to largest: 10.2 10.19 10.01 10.02 _____

7) I am smaller than 24. I am a common multiple of 7 and 3. What number am I? _____

8) Michael has 1200 rubber bands. He puts them equally into 10 boxes. How many rubber bands are there altogether in 6 of the boxes? _____

Solve. Show your work and box your answers. Put all fractions in lowest terms.

9) $54 - 12 \times (13 - 4) \div 3 + 6$

10) 2.3 + 12.87

Day 6

Helpful Tip! Use the problem solving plan when working with word problems.

Steps in the Problem Solving Plan

Step 1: Think about what the question asks you to find. Underline that part of the problem
Step 2: Locate the facts in the problem. Circle them
Step 3: Choose a problem solving strategy. (Guess and Check, Work Backwards)
Step 4: Solve the problem
Step 5: Explain your reasoning
Step 6: Review and check your answer.

Solve the problem below. Write a justification explaining your answer and solution on the next page. Use complete sentences.

Toaster Ovens & Blenders

Bob sold 5 toaster ovens and 3 blenders for $500. If a blender costs $20 less than a toaster oven, how much is a blender?

Toaster Ovens & Blenders SOLUTION JUSTIFICATION

Day 7

Helpful Tip! When changing improper fractions into mixed number, see how many times the denominator goes into the numerator.

Example $\frac{14}{4}$ 14 ÷4= 4 can fit into 14, **3** full times- this becomes your whole number!
There is **2** as a remainder (14-12=2) so **2** becomes your numerator.
The denominator stays the same.

$$\frac{14}{4} = 3\frac{2}{4}$$

1) Compare using > , < , or =. $10\frac{1}{3}$ ___ $\frac{10}{3}$ _____

2) 2000 × 6 = ? _____

3) Estimate. $2736 - 528 \approx ?$ _____

4) Write $\frac{23}{4}$ as a mixed number. _____

5) I am bigger than 10. I am a common factor of 65 and 117. What number am I? _____

6) Lily is $6\frac{1}{4}$ years old and Susan is $2\frac{1}{2}$ years old. How much older is Lily than Susan? _____

Solve. Show your work and box your answers. Put all fractions in lowest terms.

7) $2\frac{3}{8} + \frac{7}{12}$

8) $4\frac{7}{8} - 2\frac{5}{12}$

9) 326 × 208

10) 279,596 – 57,621

Day 8

Helpful Tip! In order to make a whole number a fraction, put it over **1**!

Example: **12** becomes $\frac{12}{1}$ **7** becomes $\frac{7}{1}$ **21** becomes $\frac{21}{1}$

That way you can subtract a fraction from a whole number

1) Express 8 inches as a fraction of 3 feet in lowest terms. _____

2) 5600 ÷ 7 = ? _____

3) Order from smallest to largest: $\frac{5}{6}, \frac{2}{3}, \frac{3}{4}$ _____

4) List the factors of 24. _____

5) Which is smallest? .5 .005 .05 5 _____

6) A clerk works $3\frac{5}{6}$ hours in the morning and $3\frac{4}{5}$ hours in the afternoon. How many hours does she work in a day? _____

7) Joe bought 9 pounds of crawfish on Friday. He ate $2\frac{3}{4}$ pounds on Friday and $3\frac{3}{5}$ pounds on Saturday. He many pounds did he have left? _____

Solve. Show your work and box your answers. Put all fractions in lowest terms.

8) $\frac{2}{3}+\frac{1}{6}+\frac{3}{8}$ **9)** $12-2.5$ **10)** $12-\frac{2}{5}$

Day 9

1) 32,000 + 8,000 = ? _____

2) List the prime numbers from 21-40. _____

3) List the factors of 84. _____

4) Write six tenths in numerals. _____

5) I am between 10 and 15. I am a multiple of 2. I am a factor of 48. What number am I? _____

6) Mary is taking a 5,700 mile trip. She has traveled $\frac{1}{3}$ of the distance. How much further does she have to go? _____

7) Lee bought 5 packages of white envelopes and 3 packages of brown envelopes. There were 112 envelopes in each package. How many envelopes did she buy altogether? _____

8) Robert packed 1320 cookies into bags of 22 each. He sold all of the cookies at $2 per bag. How much money did he make? _____

Day 10

Helpful Tip! When simplifying fractions, divide the numerator and denominator by the same number.

Example: You can divide 15 by 5 to get 3
You can divide 35 by 5 to get 7

$$\frac{15}{35} = \frac{3}{7}$$

1) Express 15 cents as a fraction of $1 in lowest terms. _____

2) 45,000 – 6,000 = ? _____

3) List the prime numbers from 41 – 60. _____

4) 27,900 – ___ = 22,500 _____

5) 1300 + ___ = 5,000 _____

6) Round 245.675 to the nearest tenth. _____

7) Mrs. Meyer jogs $\frac{3}{4}$ of a mile in a day. How many miles does she jog in 8 days? _____

Solve. Show your work and box your answers. Put all fractions in lowest terms.

8) 579×86

9) $579 \div 23$

10) 92.12 – 76.8

Day 11

Helpful Tip! There are 60 seconds in a minute and 60 minutes in an hour!

1) List the prime numbers from 61 – 80. _____

2) List the factors of 75. _____

3) 530,000 – 16,000 = ___. _____

4) What are the first 3 common multiples of 6 and 9? _____

5) Reduce $\frac{32}{96}$ to lowest terms. _____

6) Write as a decimal. $\frac{9}{100} + 3 + \frac{7}{10}$. _____

7) How many minutes are there in $2\frac{3}{5}$ hours? _____

Find the value of the following. Show your work and box your answer.

8) $60 \div (14 - 4) \times 3$

9) $7\frac{4}{7} - 3$

10) 42,802 - 1557

Day 12

Solve the problem below. Write a justification explaining your answer and solution on the next page. Use complete sentences.

Mystery Number

Elizabeth and Mimi are playing a factor game. Elizabeth told Mimi that she was thinking of a mystery number that had 2, 7, and 9 as factors. She said there were nine other factors of her number. What are the other factors of her number? What is his mystery number?

Mystery Number SOLUTION JUSTIFICATION

Day 13

Ratio Review

Writing ratios to compare objects

1) For every 5 boys on a softball team there is 1 girl. What is the ratio of boys to girls?

2) In a bag of candy for every 3 chocolate pieces there are 7 sugar pieces. What is the ratio of chocolate pieces to sugar pieces?

Writing ratios in different forms

1) 6 eggs were rotten and 5 eggs were broken, write the ratio of rotten eggs to broken eggs.

2) 8 marbles are red, 11 marbles are purple, write the ratio of purple marbles to red marbles.

Finding equivalent ratios and determining if two ratios are equivalent

1) 4:9 and 12:27

2) 2:5 and 8:20

3) Ms. Wright's class and Mr. Gold's classes are going on a field trip. There are 20 children for every 10 adults in Ms. Wright's class. There are 10 children for every 5 adults in Mr. Gold's class. Are the ratios of children to adults the same for both classes? Explain.

4) Billy and Charlie both have fish tanks. Billy has 8 goldfish and 12 clown fish. Charlie has 12 goldfish and 18 clown fish. Are the ratios of goldfish to clown fish the same for both fish tanks? Explain.

Use the real world context to complete the following tables.

1. Linda is making a bracelet. She uses 5 blue beads for every 1 silver bead. Complete the table to show the ratio of blue beads to silver beads.

Blue	5	10		20	
Silver	1		3		5

2. There are 20 light bulbs in 5 packages. Complete the table to find the rate that gives the number of light bulbs

in 3 packages. **Write this rate in three different ways.**

Light bulbs		8		16	20
Packages	1			4	

3. Joanne pays $18 for 3 pens at staples. Complete the table to find the rate that gives the cost per pen.

Dollars			18		30
Pens	1	2			5

Day 14

Integers

Need help? Visit https://www.khanacademy.org/math/pre-algebra/negatives-absolute-value-pre-alg

Is It an Integer?

Integers are whole numbers and their negative opposites. Therefore, these numbers can never be integers:

- fractions
- decimals
- percents

Looking at a number line can help you when you need to compare and order integers and when you add or subtract integers.

Adding and Subtracting

Whether you are adding or subtracting two integers, **start by using the number line to find the first number.** Put your finger on it. Let's say the first number is 3.

- Then, if you are **adding a positive number,** move your finger to the right as many places as the value of that number. For example, if you are adding 4, move your finger 4 places to the right.

  3 + 4 = 7

- If you are **adding a negative number,** move your finger to the left as many places as the value of that number. For example, if you are adding -4, move your finger 4 places to the left.

  3 + -4 = -1

- If you are **subtracting a positive number,** move your finger to the left as many places as the value of that number. For example, if you are subtracting 4, move your finger 4 places to the left.

  3 - 4 = -1

- If you are **subtracting a negative number,** move your finger to the right as many places as the value of that number. For example, if you are subtracting -4, move your finger 4 places to the right.

  3 - -4 = 7

Here are two **rules to remember:**

- Adding a negative number is just like subtracting a positive number.

  3 + -4 = 3 - 4

- Subtracting a negative number is just like adding a positive number. The two negatives cancel out each other.

  3 + 4 = 3 - -4

Integer Practice

Comparing and Ordering Integers: For (a-l), use >, <, or = to compare the integers.

a. 3 ____ −5 b. −10 ____ 0 c. −7 ____ 7 d. −1 ____ −1 e. −8 ____ −2

f. 14 ____ −15 g. −56 ____ −58 h. 43 ____ 34 i. −16 ____ 15 j. −354 ____ −345

k. 789 ____ −798 l. −605 ____ −655

Ordering Integers: For (m – r) put each set of numbers in order from smallest to largest.

m. −3, 1, −2 _____ n. −5, −6, −1 _____ o. 3, - 12, - 4 _____

p. – 8, - 12, - 3_____ q. −7, 0, 2 _____ r. – 3, 6, - 6 _____

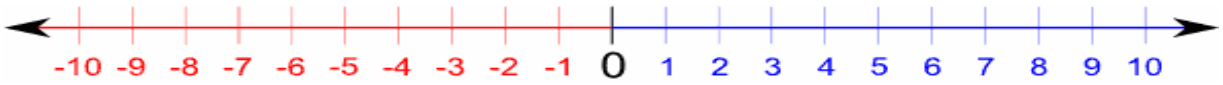
Absolute Value of Integers: For (s – z) find the absolute value of each integer.

s. |- 9| = _____ t. |22| = _____ u. |- 88 | = _____ v. |4| = _____

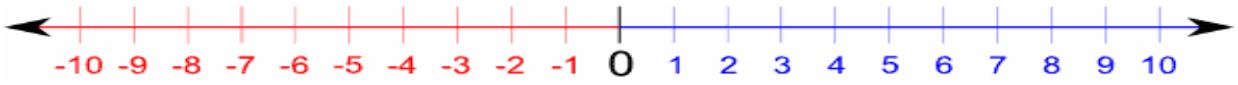
w. |- 98| = _____ x. −|101|= _____ y. −|– 6| = _____ z. |34| = _____

For numbers 1-6, use the number lines to represent the addition or subtraction sentence and help you find the answer.

1. 4 + - 7 =_____

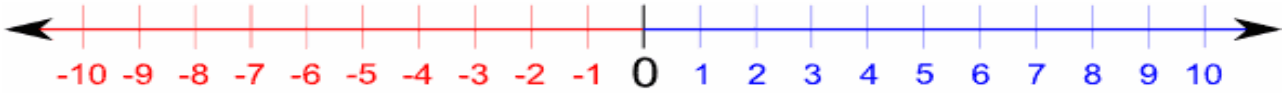


2. – 9 + 10 = _____

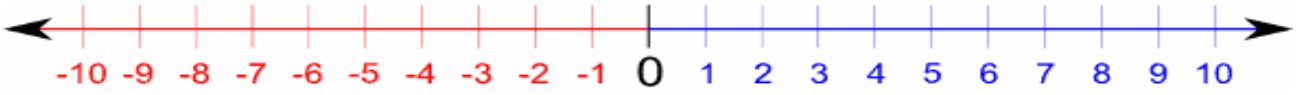


3. - 6 + - 1 = _____

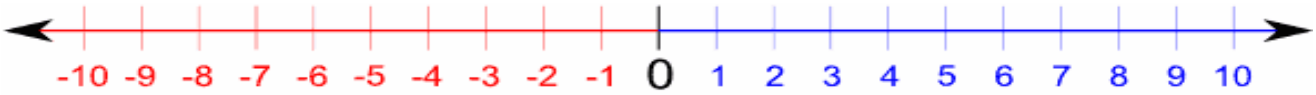
4. – 4 – 2 = _____


-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

5. 2 – (-1) = _____


-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

6. – 1 – (– 5) = _____


-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Day 15

Translating Words into Mathematical Expressions

Example:

8 times 2 means 8 x 2

4 + *c* means *c* more than 4

Translate the words into numbers, variables, and symbols.

1) 10 less than 14 _____ 2) half of 16 _____ 3) *v* squared _____

4) *t* more than 9 _____ 5) 3 cubed _____ 6) the sum of 2 and 12 _____

7) the product of 5 and *x* _____ 8) twice 11 _____ 9) 2 to the 4^{th} _____

10) the quotient of 24 and 8 _____

Part 2

HOW I SPENT MY SUMMER DAZE

DIRECTIONS

- Select one day during your summer vacation and keep track of the hours you spend doing activities during that day. Be sure that you account for all 24 hours.

- Use the organizer provided to indicate the activity and the approximate number of hours you spent doing this activity.

- What fraction of the day did you spend doing this activity? Show the fraction with a denominator of 24 and then reduce the fraction if possible.

- Convert the fraction to a decimal and percent.

Note- We will make the pie chart together in class using the data that you provide.

HOW I SPENT MY SUMMER DAZE ORGANIZER

NAME_____

DAILY ACTIVITY	HOURS	FRACTION	DECIMAL	PERCENT	DEGREES
TOTALS					

HOW I SPENT MY SUMMER DAZE

SIXTH GRADE AMS SUMMER ASSIGNMENT RUBRIC

	4	3	2	1
DATA TABLE	•24 hours represented •chart complete •pie chart attached	•Does not represent a 24 hour day •chart complete •pie chart attached	•Several missing hours in the day •Totals are not filled in •pie chart is attached	•Many missing hours in the day •chart is incomplete •pie chart is attached
MATH ACCURACY 2X	All computation is correct. All fractions are given and then simplified.	One error in computation. All fractions are simplified.	Two errors in computation. Several fractions are not simplified.	Three or more errors in computation. Fractions are not simplified.
PIE CHART	A protractor is used to accurately measure the degrees correctly. The activity and percent are labeled in each portion of the circle.	A protractor is used to measure the degrees of each part of the circle, but there is an error. Everything is labeled.	Many errors in the angle size of each section of the circle. The activity and percent of the activity are not labeled.	A protractor is not used to create the pie chart. The activity and percent are not labeled.
PRESENTATION of the pie chart and the table	•Neat •Colorful •Eye appeal	•Neat •Color used	•Neat	•More care is needed in the presentation of the project.

Name_____ **Points**_____**Grade**_____