

June 2019

To our incoming 7th/8th graders,

We are looking forward to having you as our students next year! As we wish you a fun, relaxing, and safe summer, please read through the list of supplies (below) that you will need when you return to school at the end of August.

writing / reading

2 two-pocket folders
1 durable binder (1" - 2")
1 package of loose-leaf paper (for binder)
1 package of 5-divider tabs (recommended)
1 one-subject notebook

social studies

1" binder
1 package of 6-divider tabs
1 box of pens (black or blue)
1 package of loose-leaf paper
1 one-subject notebook

math / science

2 folders: one for math, one for science
1 pack of red ink pens (8 or 10 count)

(8th grade only): 2 composition notebooks
(lined pages, NO grid pages)

(7th grade only): 4 one-subject notebooks
(composition OR spiral, lined pages, NO grid pages)

for all subjects

pencils
colored pencils
highlighters
glue sticks
individual pencil sharpener

Remember to:

- *read your summer reading book;*
- *complete your reading project; and*
- *complete your math packet!*

*****You are encouraged to complete the district's math calendar for extra credit.**

Thank you! We look forward to seeing you for the 2019-2020 school year.

| | |
|---------------|---|
| Mr. Neagle | (social studies, 8 th reading) |
| Mrs. Vogel | (writing, 7 th reading) |
| Mrs. Alves | (7 th grade math, science) |
| Mr. Perkins | (8 th grade math, science) |
| Ms. Blanchard | (special education) |

June 2019

Dear parents and guardians,

In an effort to keep students' mathematical skills strong throughout the summer, we are assigning a summer math packet that will be collected at the beginning of next school year. **This packet will be incorporated into their 1st quarter math grade.** Students are expected to show all work and thinking.

The 8th grade math standards are rigorous and mastering these standards will require a solid understanding of 7th grade concepts. Additionally, students will face stiff competition when it comes to placement in secondary schools and high school courses, so practicing math over the summer is a good investment in the educational career.

How you can do to help your child:

- Make sure your child is working on the packet throughout the summer. There is about one problem per weekday, but students may prefer to complete multiple problems in one sitting.
- Encourage your child to save her/his math notebooks from the school year so she/he may use to to help then solve the review problems.
- Asking your child to share the strategy they used to solve the problem and how they could prove that their answer is correct.
- Check out websites like khanacademy.org or purplemath.com, which are great resources for reviewing mathematical concepts.

Sincerely,

Mr. Jared Perkins
Grade 8 Math/Science Teacher
jperkins@lowell.k12.ma.us

Summer Math Calendar Evaluation for Students

Please rate the following on a scale from 1-10, with 1 being the easiest and 10 being the hardest.

- 1.) _____ How would you rate the difficulty of the problems in general throughout the summer math calendar?
- 2.) _____ How would you rate the variety and amount of problems throughout the calendar?
- 3.) What types of problems in the calendar were the most difficult and why?
- 4.) What types of problems in the calendar were the easiest and why?
- 5.) When did you complete the calendar? How did you pace yourself when completing the calendar? (Did you do it every day, once a week, completed it in a few days?)
- 6.) If you could change anything about the summer math calendar what would you change and why?

Thank you for taking the time to complete this evaluation! I really appreciate your input!



WEEK 1



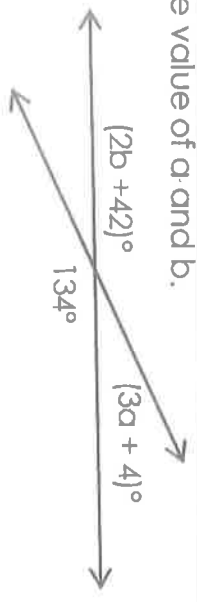
Problem

Work & Answer

Give the sum or difference:

- a.) $8 - 15$ b.) $-8 - 15$
- c.) $-8 + 15$ d.) $-8 + (-15)$

Find the value of a and b.



Simplify each expression by combining like terms.

- a.) $11x - 7 - 3x + 4$
- b.) $21a + (-18b) - 6a + 11b$
- c.) $-7w + 2w - 12w - w$

Find the width of a rectangular prism if the volume is 546cm^3 , the height is 7cm and the length is 13cm .

It takes Billy fifteen minutes to complete $\frac{1}{8}$ of a recipe. At this rate how long will it take for him to complete the recipe?



WEEK 2



Problem

Work & Answer

Solve for each variable.

a.) $\frac{w}{-12} = 3$

b.) $\frac{3}{4}x = -24$

c.) $36 = y + 14$

Simplify each expression:

a.) $-72 \div 8 + (-6) - 2$

b.) $-4 + (-32) \div (-4 \cdot 4)$

A convenience store company would like to know what flavor slushy children ages 8 through 11 prefer. The company decides to ask students in grades 3rd through 5th at Lincoln Elementary school. Identify which group is the population and which is the sample.

_____ Students in grades 3-5 at Lincoln school
_____ Children ages 8 through 11

Nancy sold a house for \$225,900 and earned 4% commission. How much did Nancy earn for the sale of this house?

Complete the table that shows a proportional relationship between the amount of small boxes of popcorn and candy sold at a movie theater.

| Candy (small boxes) | Popcorn (small boxes) |
|---------------------|-----------------------|
| | 24 |
| 12 | 96 |
| 48 | |
| | 528 |



WEEK 3



Problem

Work & Answer

Trail mix made for three people uses 3 cups of almonds, 1 cup of raisins and $\frac{1}{3}$ cup of chocolate chips. If the same ratio of ingredients is used for twelve people, how much of each ingredient is needed?

Expand each expression using the distributive property.

a.) $2(5x - 3)$

b.) $-4(2a + 6b - 7)$

c.) $8(-3m + 2n) + 12$

Find each product.

a.) -7×6

b.) -6×-7

c.) -7×-6

d.) -6×7

When Sarah invests \$4000 in a money market account she receives 1.4% simple interest annually. If she doesn't add or subtract any money how much interest will she earn after 4 years?

A bag of jelly beans contains 6 red, 4 orange, 5 pink, 3 green and 2 white jelly beans. What is the probability of choosing the following at random?
a.) 1 Pink jelly bean b.) 1 Red jelly bean
c.) Either 1 white or green jelly bean



WEEK 4



Problem

Work & Answer

Anna earned \$9 an hour babysitting. She wants to buy a 16 GB iPod that is \$120. Anna has saved \$45 so far. How many more hours of babysitting does she need to do to earn the rest to purchase the iPod?

Solve each inequality.

a.) $x + 4 < 16$

b.) $-2 > x + 3$

c.) $\frac{1}{2}(x + 4) \leq 14$

Simplify each complex fraction.

a.) $\frac{2\frac{1}{4}}{1\frac{1}{8}}$

b.) $\frac{7\frac{1}{3}}{4}$

An item is marked down by 25%. What percentage of the original cost will you pay?

Find a new perimeter and area if the shape is enlarged by a scale factor of two.

5.5 cm



3.25cm



WEEK 5



Problem

Work & Answer

Write the property that best matches the following:

a.) $13 + -13 = 0$

b.) $(-12) + 16 = 16 + (-12)$

Find the diameter of a circle if the area is 153.86m^2 . Use 3.14 for pi.

Write an expression to show the total cost of an item x with a 35% discount.

Joe and two friends are going to a concert. The total cost is \$186. If there is a \$24 service fee, write and solve an equation to find out how much one ticket is.

A rectangular pyramid is sliced by a plane parallel to its base. What shape is shown from the cross section?



WEEK 6



Problem

Work & Answer

Four friends equally share the cost of their dinner that was \$64 plus a 20% tip. If each person contributes \$19, will that be enough to cover the bill with tip? Explain.

Solve the following:

a.) $\frac{-24}{3}$ b.) $\frac{-36}{-4}$

People in two sample groups were asked to identify their favorite kind of pizza. Study the results and circle a generalization.

| Sample Group | Cheese | Sausage | Pepperoni | Veggie | Total |
|--------------|--------|---------|-----------|--------|-------|
| A | 30 | 45 | 7 | 18 | 100 |
| B | 48 | 24 | 15 | 13 | 100 |

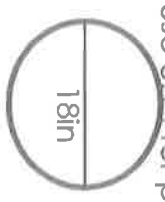
- a.) Cheese is the most popular in each group.
- b.) Overall cheese and sausage are most preferred.
- c.) Sausage is always the favorite.

Factor each by using the GCF.

a.) $36x + 81$ b.) $24a + 36$

Find the following based on the circle. Use 3.14 for pi.

- a.) The area of the circle
- b.) The circumference of the circle





WEEK 7



Problem

Work & Answer

Circle which has the same value as the following:

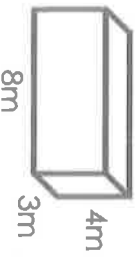
$$-6 + (-9 + 14)$$

a.) $(-6 + 9) - 14$

b.) $(6 - 9) + 14$

c.) $(-6 + -9) + 14$

Find the surface area of the given prism:



The asking price on a house was \$350,000. Because it was on the market for six months it was finally sold for \$297,500. What percentage of the original price was it sold for?

Solve each inequality.

a.) $3x < -24$

b.) $14 \leq -7x$

c.) $4x - 8 > -40$

Divide. Write the answer in simplest form.

$$-2\frac{1}{3} \div 1\frac{1}{12}$$



WEEK 8



Problem

A playing card is chosen at random from a standard deck of cards. What is the probability of choosing the following:

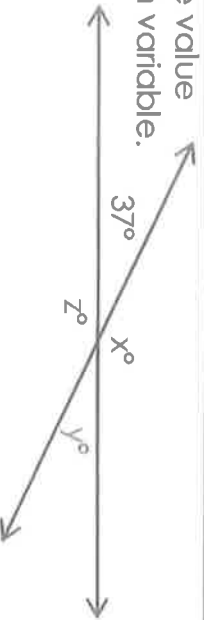
a.) P(5 of Diamonds) b.) P(One Jack)

Simplify each expression.

a.) $-13 + 25 - 36 + -2$

b.) $-54 \div 9 \times -7 \div 6$

Find the value of each variable.



Sam sells cars and earns 3.5% commission in sales. In one day he sold 3 of the same cars each for \$21,500. How much commission did Sam earn for the day?

It takes Army 8 minutes to mow $\frac{1}{6}$ of her backyard. At that rate how many more minutes will it take her to finish mowing her backyard?

Work & Answer

a.) P(5 of Diamonds) = b.) P(One Jack) =



WEEK 9



Problem

Work & Answer

Simplify each expression.

a.) $-7 + 13 + 5(-6 + 8)$

b.) $3x - 4(x + 2y) + 17y$

A recipe for fluffy slime calls for $3\frac{3}{4}$ cups of shaving cream, $\frac{1}{2}$ cup of glue, $\frac{1}{2}$ teaspoon of baking soda and $1\frac{1}{2}$ tablespoons of saline solution; this is enough for 2 people. How much shaving cream would you need if you were making enough slime for ten people?

The cost of a sweatshirt was on sale for \$18. Find the percent of decrease if the sweatshirt was originally \$25.

Solve each inequality and graph the solution on a number line.

a.) $-12a + 7 \leq 31$

b.) $-9 > 3b + 6$

A triangular pyramid is sliced by a plane perpendicular to its base. Draw the cross section.

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Problem

Work & Answer

Find the circumference of the circle below.

Use $\frac{22}{7}$ for pi.



Anna is wrapping a birthday gift for her brother and has one large piece of wrapping paper left. The size of the paper is 6 feet by 4 feet. Will she have enough paper to cover a box that is $12\text{in} \times 6\text{in} \times 4\text{in}$?

Simplify the complex fractions.

a.) $\frac{8\frac{2}{5}}{6}$

b.) $\frac{3\frac{1}{3}}{2\frac{4}{9}}$

Solve each equation below.

a.) $5x + 8 = 53$ b.) $-6w - 12 = 51$ c.) $\frac{y}{4} + 12 = -8$

Find the sum of each below. Describe how you know what the sign of your answer will be.

a.) $-19 + 8$

b.) $-6 + (-5)$