

▶▶▶▶▶ SUMMER MATH ◀◀◀◀◀ CALENDAR

Dear Soon to Be 8th Graders and Parents of Soon to Be 8th Graders,

This summer math calendar has not been created to torture you. It was created with the opposite intent. This was created to make you math aficionados, especially as you prepare to begin math in the eighth grade! To help you do this, I have put together this calendar with math concepts that you have already learned so that your skills are sharp and ready to begin 8th grade math.

Each week you will be assigned five sets of problems to complete. You may choose when to do it. You may work on the calendar in whichever way best suits your style. You may do the problems for the week in one day or you may spend five minutes a day completing each problem. All I ask is that you do not leave the calendar until the week or even the day before school begins. Trust me, you will not complete it! This calendar is meant for you to maintain your skills. You may use siblings, parents, and most importantly your brain to complete the calendar. You must show all of your work and the work should be done in pencil.

Lastly, please complete the evaluation forms. There is one for you and one for your parents. Good luck! Have a fabulous summer! I cannot wait to see you in the fall!

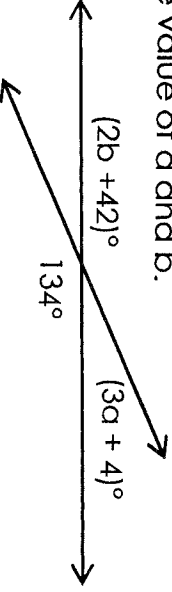
Sincerely,





WEEK 1



Problem	Work & Answer
<p>Give the sum or difference:</p> <p>a.) $8 - 15$ b.) $-8 - 15$ c.) $-8 + 15$ d.) $-8 + (-15)$</p>	
<p>Find the value of a and b.</p> 	
<p>Simplify each expression by combining like terms.</p> <p>a.) $11x - 7 - 3x + 4$ b.) $21a + (-18b) - 6a + 11b$ c.) $-7w + 2w - 12w - w$</p>	
<p>Find the width of a rectangular prism if the volume is 546cm^3, the height is 7cm and the length is 13cm.</p>	
<p>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?</p>	



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
<p>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?</p>	
<p>Solve each inequality.</p> <p>a.) $x + 4 < 16$</p> <p>b.) $-2 > x + 3$</p> <p>c.) $\frac{1}{2}(x + 4) \leq 14$</p>	
<p>Simplify each complex fraction.</p> <p>a.) $\frac{2\frac{1}{4}}{1\frac{1}{8}}$</p> <p>b.) $\frac{7\frac{1}{3}}{4}$</p>	
<p>An item is marked down by 25%. What percentage of the original cost will you pay?</p>	
<p>Find a new perimeter and area if the shape is enlarged by a scale factor of two.</p> <p>5.5 cm</p>  <p>3.25cm</p>	

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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

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.

Work & Answer

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

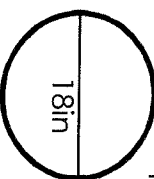
- a.) Cheese is the most popular in each group.
b.) Overall cheese and sausage are most preferred.
c.) Sausage is always the favorite.

Factor each by using the GCF.

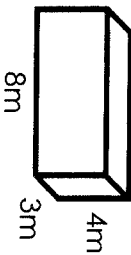
a.) $36x + 81$ b.) $24a + 36$

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

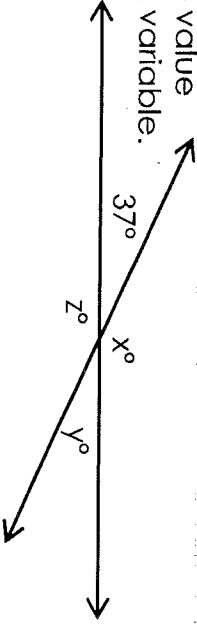
- a.) The area of the circle
b.) The circumference of the circle



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Problem	Work & Answer
<p>Circle which has the same value as the following:</p> <p>$-6 + (-9 + 14)$</p>	<p>a.) $(-6 + 9) - 14$ b.) $(6 - 9) + 14$ c.) $(-6 + -9) + 14$</p>
<p>Find the surface area of the given prism:</p> 	
<p>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?</p>	
<p>Solve each inequality.</p> <p>a.) $3x < -24$ b.) $14 \leq -7x$ c.) $4x - 8 > -40$</p>	
<p>Divide. Write the answer in simplest form.</p> <p>$-2\frac{1}{3} \div 1\frac{1}{12}$</p>	

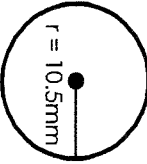
WEEK 8

Problem	Work & Answer
<p>A playing card is chosen at random from a standard deck of cards. What is the probability of choosing the following:</p> <p>a.) P(5 of Diamonds) b.) P(One Jack)</p>	<p>a.) P(5 of Diamonds) = b.) P(One Jack) =</p>
<p>Simplify each expression.</p> <p>a.) $-13 + 25 - 36 + -2$</p> <p>b.) $-54 \div 9 \times -7 \div 6$</p>	
<p>Find the value of each variable.</p> 	
<p>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?</p>	
<p>It takes Amy 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?</p>	

WEEK 9

Problem	Work & Answer
<p>Simplify each expression.</p> <p>a.) $-7 + 13 + 5(-6 + 8)$</p> <p>b.) $3x - 4(x + 2y) + 17y$</p>	
<p>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?</p>	
<p>The cost of a sweatshirt was on sale for \$18. Find the percent of decrease if the sweatshirt was originally \$25.</p>	
<p>Solve each inequality and graph the solution on a number line.</p> <p>a.) $-12a + 7 \leq 31$</p> <p>b.) $-9 > 3b + 6$</p>	
<p>A triangular pyramid is sliced by a plane perpendicular to its base. Draw the cross section.</p>	

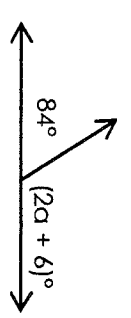
WEEK 10

Problem	Work & Answer
<p>Find the circumference of the circle below.</p> <p>Use $\frac{22}{7}$ for pi.</p> 	
<p>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 12in x 6in x 4in?</p>	
<p>Simplify the complex fractions.</p> <p>a.) $\frac{8\frac{2}{5}}{6}$ b.) $\frac{3\frac{1}{3}}{2\frac{4}{9}}$</p>	
<p>Solve each equation below.</p> <p>a.) $5x + 8 = 53$ b.) $-6w - 12 = 51$ c.) $\frac{y}{4} + 12 = -8$</p>	
<p>Find the sum of each below. Describe how you know what the sign of your answer will be.</p> <p>a.) $-19 + 8$ b.) $-6 + (-5)$</p>	

Name: _____

8th Grade Summer Math Quiz

Complete the following problems. Show your work using the extra workspace page.

1.) Simplify: $4(a - 2b + 3c) + 11a$	2.) Find each product or quotient. a.) $-21 \div -7$ b.) -3×4 c.) -5×-6 d.) $48 \div -6$	3.) A salad made for three people uses one head of lettuce, 3 tomatoes, and 6 mushrooms. If the same ratio is used in a salad for ten people how many heads of lettuce are needed?
4.) Find the surface area of a cube that has a side length of 3.5 inches.	5.) A bag of marbles contain 7 blue, 6 green, 3 yellow and 2 red. What is the probability of randomly choosing 1 blue or red marble?	6.) Solve the equation: $2x - 7 = -23$
7.) Susan's haircut was \$18. If she gives a 20% tip, what will her total cost be?	8.) Find the radius of the circle that has an area of 200.96cm ² .	9.) Find the value of a. 
10.) It takes Samantha four minutes to walk one-sixth of the way home from school. At this rate how long will it take her to get home?	11.) Solve the inequality $3x + 9 \geq 24$.	12.) Robert invests \$3,250 into a money market account with an annual 1.7% simple interest rate. If he does not add or subtract any money, how much interest will he earn after three years?
13.) Simplify: $12 - 3 \times 5 + 2^3$	14.) A triangular pyramid is sliced by a plane parallel to its base. What shape is this cross section?	15.) Simplify this complex fraction. $\frac{\frac{4}{5}}{2\frac{1}{3}}$

8th Grade Summer Math Quiz Workspace

Use this space to show your work (if necessary) for each problem.

1.)	2.)	3.)
4.)	5.)	6.)
7.)	8.)	9.)
10.)	11.)	12.)
13.)	14.)	15.)

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 number 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!

Summer Math Calendar Evaluation for Parents



- 1.) How difficult did you feel this summer math calendar was for your student? Was it too easy or too difficult or somewhere in the middle?
- 2.) How much help did you give your son or daughter in completing this calendar?
- 3.) What would you say was the best thing about the summer math calendar?
- 4.) What would you say was the most difficult thing about the summer math calendar?
- 5.) How did you feel about the amount of problems given to your student?

Thank you for taking the time to complete this evaluation! I really appreciate what you have to say!