Middle School Summer Math Grade 6

Each week day, complete ONE day of math (5 problems).
Only do ONE day at at time so that you working memory gets the workout it needs!

This work can be completed with an adult or helper at home - some of it may be new or you may need more information to complete a problem - and that's okay!

If you and your adult can't solve a problem, star it and we can look at when you return in August. You will receive your first grade in math for completing and turning in your work! Try not to star too many - you want to receive as much credit for your work as possible. Show us that you tried. You've got this!

61,248 +	53 283 =	
01,270 1	30,200 —	

- 3 Mark the **best** description of a rectangle.
 - a parallelogram that has four right angles
 - a quadrilateral that has four equal sides and four right angles
 - \bigcirc a polygon that has four sides

List the measurements below from smallest to largest.

7 cm 18 mm 1 m 3 dm

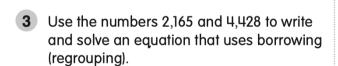
Troy, Rico, and Mario each bought an item at the bookstore. Troy bought a magazine for \$4.99, Rico bought a pocket dictionary for \$12.99, and Mario bought a package of notepads for \$8.95. What is the average amount that each boy spent?

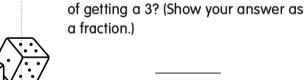
\$_____



Day 2

- 1 742 x 63 = _____
- 2 57)985





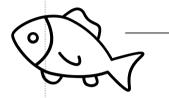
5 Sarah and her family just got back from a vacation. They had been traveling for 3 days, driving $8\frac{1}{2}$ hours each day. How many hours altogether were they in the car?

When rolling a die, what is the chance

- $4\frac{1}{3} 2\frac{5}{6} =$
- **3** What units are used to measure area?
 - O cubic units
 - O linear units
 - O square units

What time is $3\frac{1}{3}$ hours after 11:45 p.m.?

Aidan had 13 tropical fish and gave 8 of them to his brother. Then Aidan bought 6 more from the pet store. Each fish cost \$9.45. How many fish does Aidan have now?



Day 4

- 1 16.2 + 1.62 = _____
- 2 27.48 x 9
- What is the area of a rectangle that has sides measuring 12 centimeters and 15 centimeters?

Show your work.

What temperature is 25 degrees lower than 57°F?

As they walk along the sidewalk, Joan and Grace are trying to jump over all the cracks. If they pass 8 houses and there are 14 cracks in the sidewalk in front of each house, how many cracks altogether will Joan and Grace try to jump over?



Day 5: Which Activity Will You Choose To Do?

> Activity 1

Josh just finished building a house for his dog. Now he wants to put carpet on the floor of the doghouse to keep his pet warm during the cold winter months ahead. Josh measured the perimeter of the floor at 122 inches. Use this information to answer the following questions. Show your work under each question.

1. If the width measurement of the floor is 25 inches, how many square feet of carpet does Josh need to cover the entire floor?



2. If carpet costs \$12.00 a square foot, how much will Josh have to spend?

➤ Activity 2

Brittany walks dogs in her neighborhood. She gets paid \$2.25 for each dog. When she is sick, she pays her younger brother Ben 75¢ per dog to walk them for her. Use this information to answer the following questions. Show your work under each question.

1. What fraction of the amount Brittany gets per dog does she pay Ben to fill in for her?

2. If Ben makes \$4.50 filling in for Brittany, how much does Brittany get to keep for that day?

¢





- 368 x 9 = _____
- **2** 499,969 + 63
- 3 Which combination of coins makes 97¢?
 - 2 quarters, 3 dimes, 3 nickels,7 pennies
 - O 1 quarter, 6 dimes, 1 nickel, 7 pennies
 - O 3 quarters, 1 dime, 1 nickel, 2 pennies

- What is half of 1,800?
- 5 If Cai buys 3 new china dolls for her collection, and each doll costs \$66.27, how much money will she spend?

\$_____

Day 7

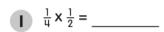
- 1 928 ÷ 64 = _____
- **2** 1,682 1,682,000 795,000
- **3** Write the number below in standard form.

six hundred thousand twenty-five



5 Seth runs every day. He jogs 6 miles a day, Monday through Friday. Every Saturday, he jogs 8 miles and every Sunday, 5 miles. How many miles in all will Seth run in three weeks?

Show your work.





3 Complete the function table.

Input	Output
1	2
2	4
3	6
4	
5	
10	
	28

What temperature on the Fahrenheit scale is 19 degrees above freezing?

0	I
	٠

5 Samantha wants to buy a new bicycle that costs \$149.99. She already has \$66.25. How much more money does she need?

4			
٠,			
~			_



Day 9

8.46 – 5.9 = _____



3 Draw a regular pentagon and then draw as many lines of symmetry as possible. 4 How many inches are in 4 yards?

James washes cars to earn money. He charges \$7.00 per compact car, \$10.00 per mid-sized car, and \$15.00 per SUV. On Saturday, he washed 3 compact cars, 4 mid-sized cars, and 2 SUVs. How much money did he earn?

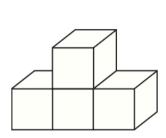
\$_____

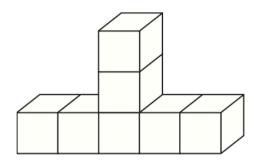


Day 10: Which Activity Will You Choose To Do?

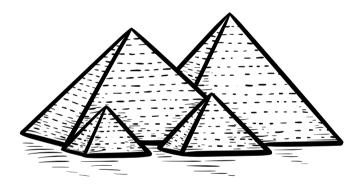
➤ Activity 1

How many blocks would be needed to build the third figure in the pattern shown below?





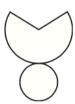
Show what the third figure would look like.



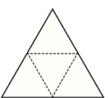
➤ Activity 2

Write the name of the solid figure that each net will make.

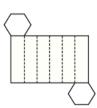
1.



2.



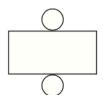
3.



4.



5.



4



- 10.9 (5.7 + 3.2) = _____
- 2 11.3 11.3 x 3 x 0.3
- 3 Write the rule for the pattern.

3 12 6 24 12 48 24

Write the value of each place in the number 235,468.

tens _____

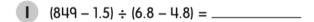
ones _____

ten thousands _____

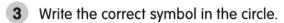
hundred thousands _____

5 If Zoe's mom is 35, and Zoe is 23 years younger, how old is Zoe?

Day 12



2 34,569,870 – 123,456

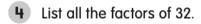


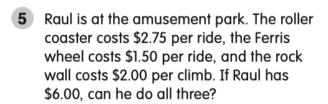






0.08

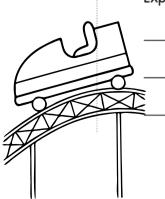


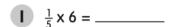






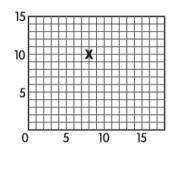
Explain why or why not.





$$\frac{1}{8} + \frac{3}{4} + \frac{2}{3} = \underline{\hspace{1cm}}$$

3 Write the ordered pair for point **X** on the grid.



What is the value of *n* in the equation?

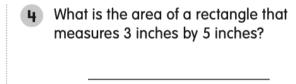
5 Four friends want to share two large pizzas equally. Each pizza is cut into ten slices. How many slices will each person get?

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Show your work.

Day 14

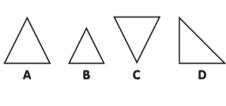
2 10)30 10)3.0 10)0.3



Alex is putting away bowls in the school cafeteria. He must stack the bowls so

they will all fit in the cupboard, but each stack can be only five bowls high. If Alex has 287 bowls to put away, what is the

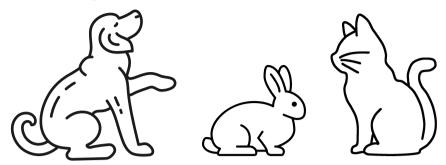
3 Which two figures are congruent?



minimum number of stacks he will have to make?

____ and ____

Day 15: Which Activity Will You Choose To Do?



➤ Activity 1

Alan, Jeff, and Lucy all take their pets to the same vet. The pets are a dog, a cat, and a rabbit. The names of the pets are Blackie, Bandit, and Moe. Read the clues to determine the kind of pet each owner has and the name of the pet. Mark the correct boxes on the grid to show your answers.

Clues

- Alan does not own the rabbit.
- Jeff owns either Blackie or Moe.
- · Jeff owns the dog.
- The rabbit's name is Blackie.

	dog	cat	rabbit	Blackie	Bandit	Мое
Alan						
Jeff						
Lucy						

> Activity 2

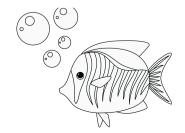
Tina has fifteen pets! They include birds, cats, fish, and hamsters. She has twice as many hamsters as cats, and together, her pets have a total of forty legs.

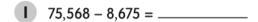
1.	How	many o	t each	kind ot	pet o	does	Tina I	nave?
----	-----	--------	--------	---------	-------	------	--------	-------

birds	
cats	
fish	
hamsters	

2. What percent of Tina's pets are cats? _____%







2 18)945 1.8)9.45

3 If x = 30, what does 55 + x - 27 equal?

Show your work.

4	Round	963.57	to th	e neares	t tenth.
---	-------	--------	-------	----------	----------

5 Sue plays on a soccer team. In one game this season, she scored 8 goals, which was one-fourth of the goals she scored for the whole season. How many goals in all did she score this season?



Day 17

2 1,569 1,569 x 10 x 20

What is the perimeter of a rectangle that is 4 cm by 5 cm?

If yesterday's high temperature was 72°, and today's was 16 degrees cooler, what was today's high temperature?

Jason has three more pet birds than he has cats. If he has eleven pets in all, how many cats does he have?

- - $6\frac{2}{3} 2\frac{1}{6} =$
- 5,274 x 21
- 3 What are the first four multiples of 15?

- Which real-world object has the shape of a sphere?
 - O globe
- egg
- football
- Jack is learning to play the piano. He knows that a piano has 88 keys and that there are 12 unique keys in each group called an octave. How many complete octaves are on a piano?



Day 19

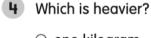
42 ÷ 6 = _____ 4.2 ÷ 6 = ____

5)10,645 5)106.45

3 Which equation should be used to find the cost of a \$100.00 jacket that is marked 25% off? Solve each equation.

○ \$100.00 x 0.25 = \$_____

○ \$100.00 x 0.75 = \$_____



one kilogram O one gram

Amy and April are twin sisters. They have a total of 120 CDs. If Amy has twice as many CDs as April, how many CDs does each twin have?



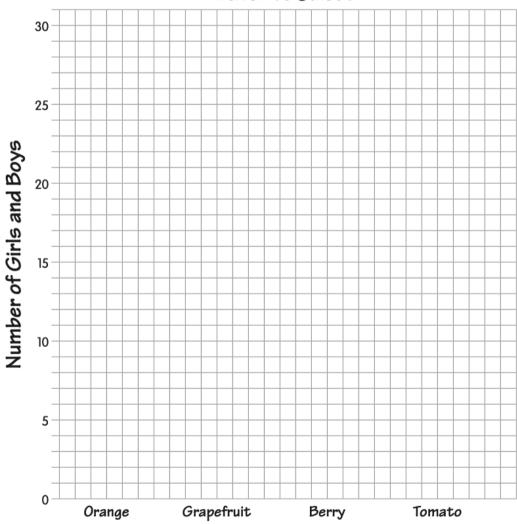
Day 20:

Use the key and the grid below to build a bar graph that displays the information in the table.

Key
red = girls
blue = boys

Favorite Juice	Girls	Boys
Orange	23	28
Grapefruit	15	18
Berry	28	22
Tomato	12	18

Favorite Juices



Kinds of Juices



3 How many degrees are in a right angle?

\cap	40°
\cup	OU

- 90°
- 120°

If each edge of a cube is 3 inches, what is the volume of the cube?

5 Beth has 14 people coming to her pizza party. She thinks that each person will eat 3 slices of pizza. If she plans to cut each pizza into 8 slices, how many pizzas should she make?



Day 22

What is the middle number (median) in this set of data?

How many quarts are in a gallon?

Brandon is twice as old as his brother Ryan. Ryan is one-eighth the age of their father. If their father is 52 years old, how old are Ryan and Brandon?

Ryan _____

Brandon _____



- 822 ÷ _____ = 205.5
- 2 $5\frac{1}{3}$ x 3
- 3 How many sides?

octagon _____

hexagon _____

decagon _____

What is the chance of rolling an even number with a six-sided die?



5 Jason and his two brothers are painting the fence around their grandmother's yard. It takes each boy four minutes to paint one board on the fence. If the fence has 147 boards, how long will it take the boys to paint the entire fence?



Day 24

- 769 x _____ = 1,768.7
- 2 15)120 1.5)120
- What is the most frequent number (mode) in this set of data?

10, 4, 12, 15, 7, 6, 15, 9, 14

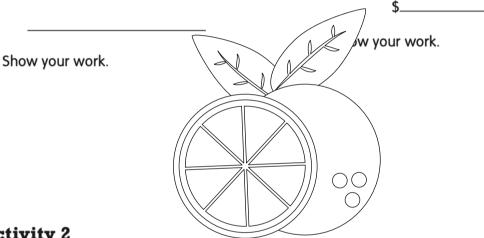
- How many different sets of two-letter initials can you make using the letters D, G, M, S, and T if you can use each letter only once in a set?
- Naomi is two-thirds as tall as her father. If Naomi is 54 inches tall, how tall is her father?

Day 25: Which Activity Will You Choose To Do?

➤ Activity 1

James and Grace are selling orange drink at the school carnival for \$0.50 a glass. Each glass holds 10 ounces of orange drink. The orange drink comes in 5-gallon containers. The carnival paid \$16.00 for each container. Use these amounts to answer the questions below. (Remember: 1 gallon = 4 quarts; 1 quart = 4 cups; 1 cup = 8 ounces)

- 1. If James and Grace have three 5-gallon containers of orange drink, what is the greatest number of glasses they can sell?
- 2. How much profit will the carnival make on the orange drink if James and Grace sell all of it?



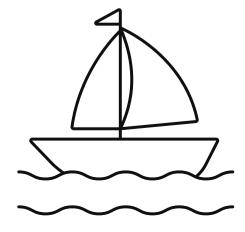
> Activity 2

Four men board a ship.
Each man has a wife.
Each couple has 2 children.
Each child has 3 cats.
Each cat has 5 kittens.

Answer the questions below. (Include both people and animals in your answers.)

1 . H	How	many	mouths	are	there	to	feed ^e	?
--------------	-----	------	--------	-----	-------	----	-------------------	---

2. How many feet are there?



- 71.25 49.3 = _____
- 2 22.57 22.57 x 4 x 0.4
- Write the number below in standard form.
 eight thousand eight and eight tenths

4 What is the value of **5** in 13,542?

Cole and his sister Chloe are cleaning their house. The house has nine rooms in it. If it takes one person about 18 minutes to clean one room, how long will it take Cole and Chloe, working together, to clean the whole house?



Day 27

- $1 6^3 + 5^2 = \underline{\hspace{1cm}}$
- 987,654 +321,789
- 3 Continue the pattern.

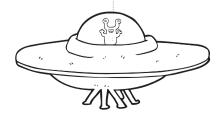
\triangle	\bigcirc	\bigcirc	\triangle	\bigcirc	\bigcirc	\triangle	
$ \longrightarrow $	\bigcirc	\cup	\triangle	\bigcirc	\cup	$ \longrightarrow $	

4 Circle the improper fractions.

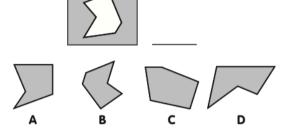
$$\frac{7}{10}$$
 $2\frac{3}{5}$ $\frac{18}{11}$ $\frac{6}{4}$ $4\frac{5}{9}$

by aliens and taken to a dark planet.

He was greeted there by a tall alien, a medium-sized alien, and six small aliens, and each of them was staring at him with three glowing eyes. How many eyes did Nick see staring at him?



- 1 305 x 27 = _____
- **2** 20⁴ = _____
- Write the letter of the figure that matches the white shape in the box.



Write an expression for the phrase below.

the product of a number and 12

5 Vickie went to the store for her mom. She bought a loaf of bread for \$2.73, a bag of cookies for \$4.19, and a dozen eggs for \$2.97. What was the total cost of the items?

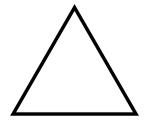
\$_____





Day 29

- $\frac{5}{6} \div \frac{2}{9} = \underline{\hspace{1cm}}$
- 3 How many lines of symmetry does an equilateral triangle have?



4 Round 35,894 to the greatest place.

5 Steve wants to buy a new music player. The player he wants costs \$279.95. The city he lives in charges a 5% sales tax, so for every \$100.00 Steve spends, he has to pay a sales tax of \$5.00. How much sales tax will Steve have to pay for the music player?

\$



Day 30: Which Activity Will You Choose To Do?

> Activity 1

1. How many three-digit numbers can you make with the digits 3, 6, 7, and 9, using each digit only once in any number?

2. What is the smallest three-digit number you can make with the digits 3, 6, 7, and 9?

How do you know?

> Activity 2

Use the digits 1 through 9 to complete the equations in the puzzle. Use each digit only once.

	÷	3	=						
_				+					
	x		=	2					
=				=		-			
					+		=		



3 Write the number below in expanded notation.

thirteen thousand five

4	What is the value of m in the equation
	$5 \times m = 60$?

Brooke has five different pairs of pants and six different shirts hanging in her closet. If she wants to wear a different combination of clothing every day, how many days can she go without having to wear an identical outfit a second time?

Day 32

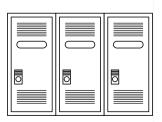
$$\begin{array}{ccc} & 6\frac{1}{4} & & 6.25 \\ & + 2\frac{1}{2} & & +2.5 \end{array}$$

3 Write the rule for the function table.

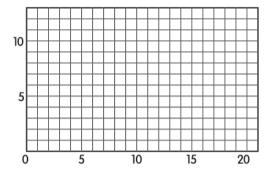
×	У
3	7.5
4	10
5	12.5
6	15
7	17.5

4 What time is 25 hours past 9:00 a.m.?

Paula and Lindsey share a locker at school. If each girl has seven classes and every class requires two books, how many books are in the locker while the girls are in a class?



- 7.7 × 8.8 = _____
- 2 1.6 1.6 300 <u>x 3</u> <u>x 30</u> <u>x 1.6</u>
- 3 Plot (18, 7) on the coordinate plane.



4 What is the range in the set of data below?

35, 39, 25, 57, 62, 46, 53, 41

Sofia is learning to knit. After her first three stitches, she had to undo the last two. Then she made three more stitches and, again, had to undo the last two. If this pattern continues, how many stitches will Sofia have to make before

she has six good stitches?

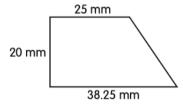
Day 34

1 25 x $\frac{2}{5}$ = _____

$$25 \div \frac{2}{5} =$$

- 2 5)0.35 5)3.5
- **3** How many grams are in a kilogram?
 - O 0.1
- O 100
- O 1,000

What is the area of this figure?



5 Patrick lost his lunch money on the way to school. If he can get thirteen of his friends to each give him a quarter, he can buy a school lunch. How much does a school lunch cost?

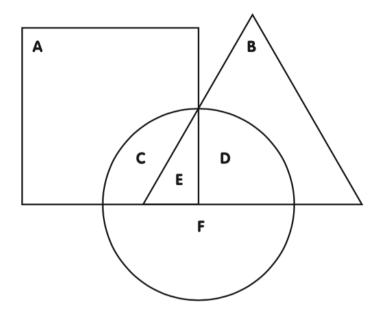
\$_____

Day 35:

Use the clues to determine what number goes in each labeled section of the figure below and what color each section should be. Complete the table to show your answers.

Clues

- Section F is purple, and its number is higher than section A's.
- The blue section is in the circle and the square but not in the triangle.
- The number in section E is 1.
- The number in the orange section is 3.
- The numbers in the blue and orange sections add up to 5.
- The section that is in all three shapes is red.
- The green section has an odd number.
- The number in the green section is less than the number in the purple section.
- The number in the brown section is 4.
- The sum of the numbers in the square is 7.
- The sum of the numbers in the large triangle is 9.
- The sum of the numbers in the circle is 12.

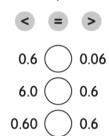


Section	Number	Color
Α		
В		
С		
D		
E		
F		

8 x (3 x 6) = _____

 $(8 \times 3) \times 6 =$

- 2 846, 181 +125, 293
- 3 Write the correct symbol in the circle.

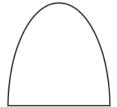


- 4 List all the factors of 48.
- 5 Hallie collects beanbag animals. She started her collection eight weeks ago with six animals. Each week since then, she has been given two more animals. How many beanbag animals does she have now?



Day 37

- 5.49 0.62 = ____
- 2 1.89 +0.253
- 3 Draw all possible lines of symmetry on the figure below.



- If a = 3 and b = 2, what is the value of the expression 11 + a b?
- Brad is going on a vacation. He will be traveling nine hundred miles and will visit six different states in twenty-three days. His teacher has asked him to keep a journal of his trip. If Brad writes one-half page each day in his journal, how many full pages will he have written by the time he gets back home?



- 1 64.2 × 0.2 = ____
- **2** 12)288 1.2)288 1.2)2.88
- **3** Write the place and the value of **3** in each number.

9,631 _____

96.31 _____

4 Circle the triangle that is congruent to the shaded one.

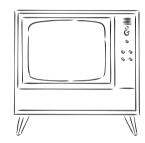








5 Ella began watching TV at 1:30 p.m. and continued watching until her mom came home and turned it off. If Ella's mom came home at 5:15 p.m., how long had Ella been watching TV?



Day 39

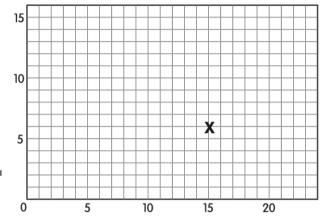
- 1 67,229 ÷ 23 = _____
- 2 122 × 0.06 0.06)122
- **3** Write 12.6 as a mixed number with the fraction in simplest form.
- Jasmine bowled five games and had scores of 182, 195, 98, 175, and 182. Which is the best measure of center to use to convince someone that Jasmine is a good bowler?
 - mean median
- 5 Katie wants to buy 6 pencils from the school store. Each pencil costs 15¢. How much money will she get back if she pays with a five-dollar bill?



Day 40:

The grid on the right represents the blocks of the city that Henry lives in. The **X** marks the location of Henry's house.

What is the ordered pair for the coordinates of Henry's house?





Start at the X to follow each set of instructions below.

- 1. Go north 4 blocks.
 - Turn left and go 8 blocks.
 - Go south 3 blocks.
 - Turn right and go 2 blocks.
 - Turn right again and go 5 blocks to the museum.

Write the letter **M** on the grid to mark the location of the museum.

What is the ordered pair for the coordinates of the museum?

- 2. Go east 3 blocks.
 - Turn right and go 4 blocks.
 - Turn left and go 4 blocks to Henry's school.

Write the letter **S** on the grid to mark the location of the school.

What is the ordered pair for the coordinates of the school?

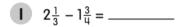


- 3. Go west 2 blocks and turn right.
 - Go north 5 blocks and then east 5 blocks.
 - Turn left and go 2 blocks to the park.

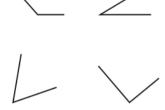
Write the letter **P** on the grid to mark the location of the park.

What is the ordered pair for the coordinates of the park?





3 Circle the acute angles.



- It was 47°F when Tanya got out of bed this morning. If the temperature rose 18 degrees by lunchtime and then dropped 26 degrees by bedtime, what was the temperature when Tanya went to bed?
- 5 Sara is braiding her hair. She wants to make 48 little braids. If it takes her 4 minutes to make each braid, how many hours will it take her to make all 48 braids?



Day 42

Write the amounts in order from least to greatest.

3 cups,
$$2\frac{1}{2}$$
 pints, $1\frac{1}{2}$ quarts, $\frac{1}{4}$ gallon

3 What is the perimeter of a circle called?



circumference

cylinder



Troy and Jarrod are eating carrots. If they each can eat 2 carrots in 3 minutes, how long will it take the two of them to eat 18 carrots?

Show your work.

- 1 9.5 x 5 = _____
- 2 52 520 52 x 9 x 9 x 90
- Write all the multiples of 6 between 50 and 100.

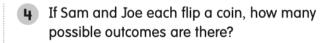
- 4 Round 35,983 to the nearest thousand.
- 6 books this weekend, 5 books last weekend, and 7 books the weekend before that. If the books averaged 120 pages each, about how many pages did Melissa read in three weekends?



Day 44

- 3)1.26 3)12.6 3)126
- Which measures of center have the same value in the set of data below?

- \circ mean and mode
- O median and mean
- \circ median and mode



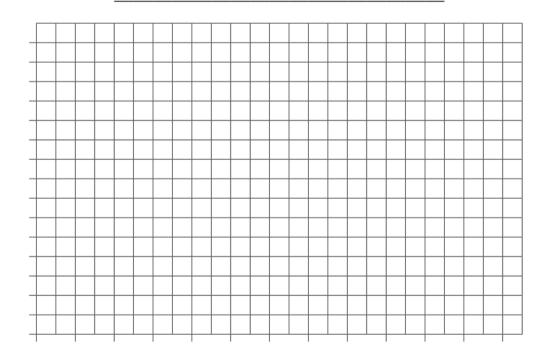
Jon is baking cookies. The recipe calls for $1\frac{1}{2}$ cups of flour, and Jon wants to triple the recipe. Write and solve two equations that show how to figure out how much flour he needs.



Day 45:

National Savings Bank keeps track of the number of new savings accounts that are opened each month of the year. Use the grid below to make a line graph that displays this year's new account information (shown in the table). Remember to include a title and axis labels on your graph.

Month	Number of New Accounts	Month	Number of New Accounts
January	215	July	249
February	189	August	260
March	230	September	240
April	245	October	225
May	250	November	208
June	270	December	285

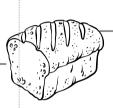




- 1 2 0.69 + 3.5 = _____
- Write the weights below in order from heaviest to lightest.

lg lcg lkg lmg

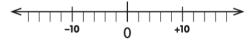
- Which plane figure has three sides, two of which are the same length?
 - trapezoid
 - O isosceles triangle
 - O scalene triangle
- 5 Greg made 11 cuts in a loaf of bread to make each slice ¹/₂ inch thick. How long is the loaf of bread?



Day 47

 $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \underline{}$

2 Use the number line to solve the problems.



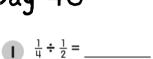
3 What is 20% of 300?

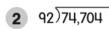
Which formula should be used to find the area of a circle?

 $\bigcirc \ \pi d \quad \bigcirc \ 2\pi r \quad \bigcirc \ \pi r^2$

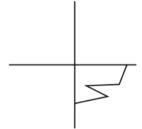
5 Sid had a collection of baseball cards.
One day he decided to give half of them to his brother Seth. Then he gave one-third of what was left to his friend Bret. Then he gave half of what was left to his friend Kevin. Now Sid has 50 baseball cards.
How many cards did he have to start with?

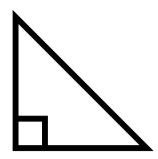






3 Draw the other three parts of the shape to show that it has two lines of symmetry.





What is the area of a right triangle that is 4 cm high and has a base that is 7 cm long?

5 How many different outfits can Gavin make with three shirts and two pairs of pants?

Day 49

A standard deck has 52 cards with 4 suits of 13 cards each: 2 red suits and 2 black suits. What is the probability of drawing a red card from a standard deck?



- O 700
- O 7,000
- O 70,000
- Juan is $1\frac{1}{4}$ feet shorter than Maria. Maria is $\frac{1}{3}$ foot taller than Luis. If Luis is 62 inches tall, how tall are Maria and Juan?

Maria _____

Juan _____

Day 50: Which Activity Will You Choose To Do?

> Activity 1

Sarim has \$1.00 in coins. One-fifth of the coins are dimes, two-fifteenths are nickels, and two-thirds are pennies. How many of each coin does Sarim have?

_____ dimes



_____ nickels



_____ pennies



Show your work.

> Activity 2

How many facts can you complete in one minute?

