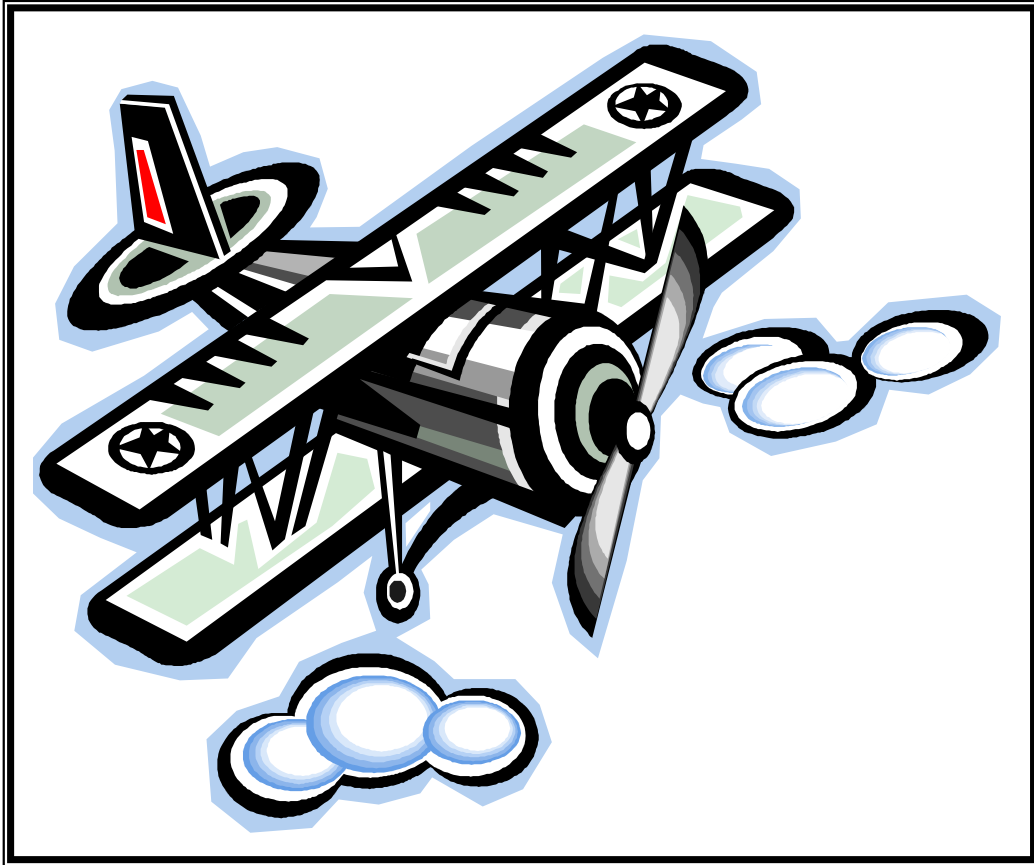


# Soar into Summer with Math!



## For Students Entering Grade 5

This summer math booklet was developed to provide students an opportunity to review grade level math concepts and to improve math performance.

Dear Parents and Students,

In this booklet you will find math activities that will help to review and maintain math skills learned in fourth grade and prepare your child for fifth grade. These activities are varied and meant to show how much fun and relevant math can be in everyday life. There are activities that can be done throughout vacation, at the pool, at a restaurant, on the beach, etc.

At least three activities should be done each week. The activities should be done in a small notebook or on separate sheets of paper organized in a folder. One problem solving activity from the problem solving section should also be completed each week. Parents and students should discuss the activities, and parents should check to see if the activities have been completed correctly.

All work should be returned to your child's fifth grade teacher. Have a great time "sailing into summer with math!"



## Week 1

1. Use a Venn diagram to compare a square and a rectangle.  
Use geometric terms.



2. Explain how you can solve these three problems using addition.

$$3 \times 4$$

$$6 \times 5$$

$$9 \times 2$$

3. Use a meter stick or yardstick to measure your bedroom. Find the perimeter and area of the total room. Find the area of your room covered by furniture. Find the area that is not covered by furniture.

4. Keep track of the time you spend on different activities for one day. Make a pie chart showing how you spent your day.

5. Solve.

$$\begin{array}{r} 2,419 \\ + 3,624 \\ \hline \end{array}$$

$$\begin{array}{r} 17,402 \\ - 9,621 \\ \hline \end{array}$$

$$\begin{array}{r} 15,499 \\ + 4,387 \\ \hline \end{array}$$

$$\begin{array}{r} 4,002 \\ - 2,849 \\ \hline \end{array}$$

## Week 2

1. How old will you be on July 4, 2028?



2. Find examples of different polygons in magazines and catalogs. Make a collage. Label your shapes.

3. Look at the stripes on the American flag. What fraction represents the number of red stripes? What fraction represents the number of white stripes?

4. Draw clocks to show the following times:

11:05

10:20

6:55

7:40

12:15

3:10

5. Find the quotient of the following problems.

$$81 \div 9 =$$

$$72 \div 9 =$$

$$64 \div 8 =$$

$$0 \div 1 =$$

$$56 \div 7 =$$

$$63 \div 9 =$$

6. List ten different combinations of coins shown below to total exactly \$0.51?



7. A class of 24 students will perform an act for the spring talent show. In the class,  $\frac{2}{3}$  of the students want to perform a skit. The rest of the students want to sing a song. The teacher decided that  $\frac{3}{4}$  of the students must agree on an act before the decision will be final.
- How many of the students want to perform a skit?
  - How many more students would have to choose a skit before  $\frac{3}{4}$  of the students agree on it?
  - Show all of your work and explain your answer.

### Week 3

1. Make a set of multiplication flash cards or use a set you already have to complete this activity. Set a timer for three minutes. See how many facts you can answer correctly in three minutes. Do this for five days. Use a chart to keep track of your data. Make a bar graph showing your results.

2. Draw a picture to show the following fractions:  $\frac{1}{2}$     $\frac{1}{4}$     $\frac{3}{4}$     $\frac{2}{3}$

3. If the following fractions were graphed on a number line,

$$\frac{2}{3} \quad \frac{1}{4} \quad \frac{3}{8} \quad \frac{1}{10}$$

- a. Which fraction would be closest to zero?
  - b. Which fraction would be closest to one?
4. Consider the number 812,763.  
Write the number that is:
- |               |       |
|---------------|-------|
| One greater   | _____ |
| One less      | _____ |
| 1,000 greater | _____ |
| 10,000 less   | _____ |
5. List fifteen different ways can you create \$1.00 using only coins.

6. If you toss a penny ten times, how many times do you predict it will come up heads? Why? Toss the penny ten times and state whether your prediction was correct.



7. Estimate the following in inches:

your height

length of your foot

distance from your elbow to the tip of your little finger

Measure to see how close your estimates were.

8. How many wholes are there in  $16/8$ ? Use models.
9. Using the digits 1 - 7 only once, what is the largest even number you can make with a 5 in the thousands place?

#### Week 4

1. Illustrate the following types of lines

horizontal

vertical

perpendicular

intersecting

parallel

2. List all of the two place decimals between 5.01 and 5.1

3. Write and solve.

$$\begin{array}{r} 28 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 66 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 200 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 1300 \\ \times 24 \\ \hline \end{array}$$

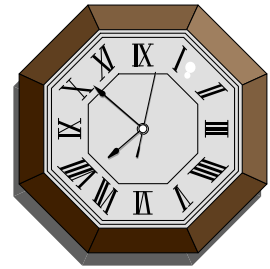
$$\begin{array}{r} 600 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} 999 \\ \times 0 \\ \hline \end{array}$$

4. Look in magazines and newspapers to find an example of a circle graph, a bar graph, and a line graph. Explain how each is used differently.

5. Use a clock to tell how many minutes are in the following parts of an hour.

$$\frac{1}{6} \quad \frac{1}{3} \quad \frac{1}{2} \quad \frac{1}{4}$$



6. List in order from least to greatest.

$$1 \quad \frac{1}{2} \quad \frac{2}{3} \quad \frac{1}{4} \quad \frac{5}{6}$$

7. Maria is making apple pies for a party. She bought 3 bags of apples. Each bag has 12 apples. She needs 8 apples to make each pie.

- What is the greatest number of pies Maria can make? Show your work or explain your answer.
- How many more bags of apples does Maria need to buy in order to make a total of 6 pies? Show your work or explain your answer.

8. Roxanna built this rectangular array using 39 tiles.


- List two number sentences this model represents.
- Roxanna found one more tile. Draw a new rectangular model using all of Roxanna's tiles.
- List two multiplication number sentences this new model represents.

## Week 5

1. Taylor has 4 coins. The total value is 35¢. What coins does he have?
2. Which is the most reasonable kilometers, meters, or centimeters to measure each of the following?

Distance from your house to your school \_\_\_\_\_

Distance around your room \_\_\_\_\_

Length of a pencil \_\_\_\_\_

Length of a swimming pool \_\_\_\_\_

Length of a bicycle \_\_\_\_\_

Distance you traveled on your vacation \_\_\_\_\_

3. Use tape or chalk to make a number line on the sidewalk. Make 0 at the starting point and 1 at the end. Practice jumping on the number line to show where the following fractions are located:

$$\frac{1}{2} \quad \frac{1}{3} \quad \frac{3}{4} \quad \frac{2}{3} \quad \frac{1}{4}$$

Now draw a number line on paper and label those fractions.

4. Ask family and friends what their favorite summer activity is. Use a tally chart to collect your data. Make a graph of your choice to show the results. Share your graph with your family.

5. Add or subtract.

$$\begin{array}{r} 1,213 \\ + 681 \\ \hline \end{array}$$

$$\begin{array}{r} 997 \\ - 142 \\ \hline \end{array}$$

$$\begin{array}{r} 528 \\ + 315 \\ \hline \end{array}$$

$$\begin{array}{r} 748 \\ - 206 \\ \hline \end{array}$$

6. At West Elementary School, there are 20 more girls than boys. If there are 180 girls, how can you find the number of boys?
7. Mrs. Kinney bought batteries in packs of 4 for the students' science experiments. How could you find the total number of batteries that she bought? Show your work.
8. If 942 trading cards are divided equally among 3 students, how many trading cards would each receive? \_\_\_\_\_
9. Sarah goes to the store to buy some food for an afternoon snack. She buys a bottle of orange juice for \$1.67, a bag of pretzels for \$0.89, and 2 apples for \$0.45 each. She must also pay \$0.16 tax.
- How much does Sarah have to pay in all? Show your work.
  - What bills and coins would Sarah give to the salesperson to pay for the food using exact change?

## Week 6

1. Write these numerals in order from least to greatest.

1,243

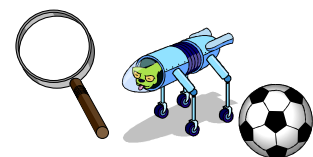
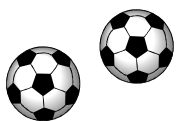
10,243

1,432

102,043

1,023

2. Look at the three sets of toys below. What members of Meghan's set are also in Marc's set? What members of Brian's set are not in either Meghan's or Marc's?





Meghan



Marc



Brian

3. Draw a picture to show  $\frac{11}{4}$ . What mixed numeral is another name for  $\frac{11}{4}$ ?

4. Round each of the following numbers to the nearest hundred.

7,342

959

8,099

5,043

439

562

5. Look at a supermarket flyer to locate two items advertised that can be purchased for under \$5.00. Pretend you purchased those items and give the cashier a five-dollar bill. What change would you get back?

6. Multiply or divide.

$$\begin{array}{r} 2,476 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 12,098 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 46,109 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7,056 \\ \times 10 \\ \hline \end{array}$$

$$3,678 \div 4$$

$$6,209 \div 7$$

$$8,099 \div 5$$

$$3,007 \div 2$$

7. Kelly predicted that each of the 24 fourth grade students in her class would use 52 sheets of composition paper during the coming month. Sam told Kelly that  $24 \times 52 = 2284$ . Use estimation to explain if you think Sam is right or wrong and why.

8. John had \$4.70 to purchase a binder. However, he found a cheaper binder in the store for \$3.27. Amy told John that  $\$4.70 - \$3.27 = \$2.20$ . Use estimation to explain why you think Amy is right or wrong.

## Week 7

1. Help your mother or father bake a batch of cookies. Measure the ingredients yourself.
2. Use a “number generator” for this activity (such as dice). Predict how many times you will roll a six if you roll the number generator 24 times. Test your prediction.
3. Add or subtract.

$$\begin{array}{r} \$7.10 \\ - 3.60 \\ \hline \end{array}$$

$$\begin{array}{r} \$3.00 \\ - 2.17 \\ \hline \end{array}$$

$$\begin{array}{r} \$10.00 \\ - 7.35 \\ \hline \end{array}$$

$$\begin{array}{r} \$8.50 \\ - 2.15 \\ \hline \end{array}$$

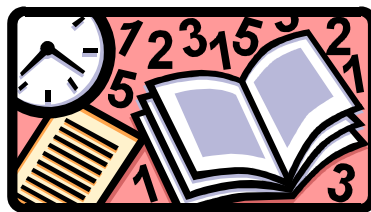
$$\begin{array}{r} \$4.12 \\ + 6.18 \\ \hline \end{array}$$

$$\begin{array}{r} \$12.67 \\ + 8.54 \\ \hline \end{array}$$

$$\begin{array}{r} \$43.78 \\ + 23.72 \\ \hline \end{array}$$

$$\begin{array}{r} \$309.12 \\ + 33.88 \\ \hline \end{array}$$

4. Lauren opened her math book to study addition. She noticed that the number of two facing pages she turned to had a sum of 67. What pages did she open to?

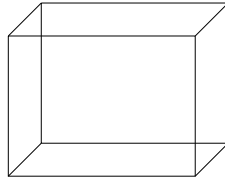
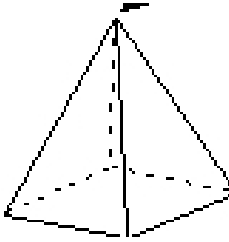


5. How many lines of symmetry does a circle have? Explain your thinking.
6. Draw your own comic strip about time.



7. There are 7 desks arranged in a row in Mr. Thompson's classroom. Hector sits 2 seats to the right of Kim. Tonya sits 3 seats to the right of Hector. How many seats to the left of Tonya does Kim sit?

8. Look at the figures below.



- Name each figure.
- How many faces does each figure have?
- Write one way the figures are the same.
- Write one way the figures are different.

### Week 8

1. Write and solve.

$$\begin{array}{r} 4,300 \\ + 7,921 \\ \hline \end{array}$$

$$\begin{array}{r} 9,000 \\ - 7,344 \\ \hline \end{array}$$

$$\begin{array}{r} 420 \\ \times 35 \\ \hline \end{array}$$

$$3,111 \div 71$$

$$817 \div 9$$

$$7 \times 6 \times 1 \times 9$$

$$\begin{array}{r} 200 \\ - 93 \\ \hline \end{array}$$

$$\begin{array}{r} 318 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 626 \\ \times 41 \\ \hline \end{array}$$

$$\begin{array}{r} 900 \\ \times 25 \\ \hline \end{array}$$

$$\begin{array}{r} 8,424 \\ - 7,424 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ 30 \\ + 19 \\ \hline \end{array}$$

2. Write a mixed numeral for each improper fraction below.

$$\frac{21}{5} \quad \frac{17}{3} \quad \frac{14}{6} \quad \frac{28}{3}$$

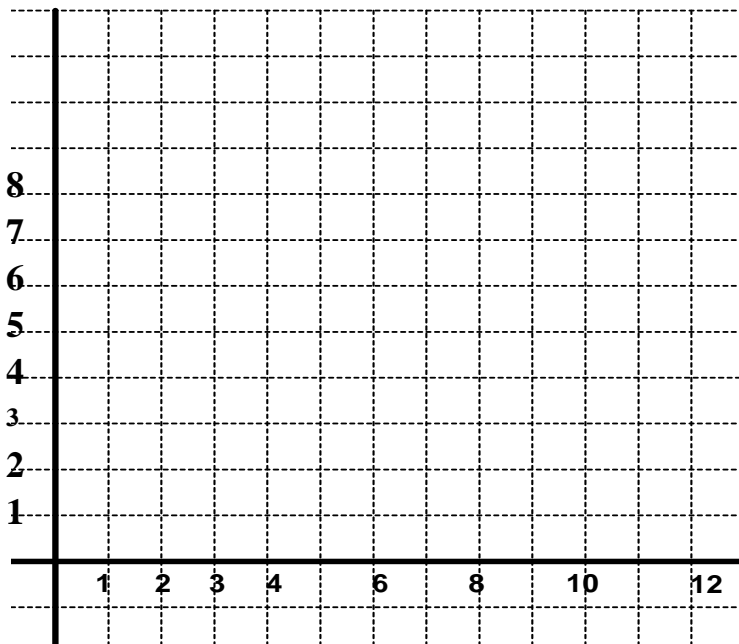
3. Collect data from family and friends about their favorite ice cream. Create a bar graph to show your results.

4. Calculate how many miles you traveled on your vacation.

5. Design a symmetrical robot that would do your math homework for you. Describe what function keys your robot would have.

6. Graph the following points on the coordinate plane:

A (2, 8)   B (1,0)   C(8,2)   D(4,3)



## Problem Solving

1. The fourth grade teachers ordered cooked crabs for their classes. Instead of getting whole crabs, they received claws and legs only. Each crab has 8 legs and 2 claws. Before feasting on the legs and claws, they began to wonder how many whole crabs must have been cooked to provide them with 80 legs and 20 claws. They decided if they drew pictures, they could find out how many whole crabs had been cooked. Draw a picture to solve this problem.

2. The fourth grade classes are going to have a crab feast in the all-purpose room. There will be a total of 30 tables which are of two types. The first type seats two people at each table, the second type seats five people at each table. If 81 students are seated and all of the tables are filled, how many tables of two are there? (*Hint – draw a picture*)



3. The 4 fourth grade classes sat quietly in the Auditorium waiting for an assembly to begin. Use the clues below to determine the order in which the fourth graders are seated.

Mrs. Kraemers's class was sitting the nearest to Mrs. Warren's class.

There was no class sitting behind Mrs. LaBracio's class.

Mrs. Faye's class was between two other fourth grade classes.

Mrs. Kraemer's class was closest to the stage.

Explain how you found your answer. What strategy did you use?

4. The Eastern Goldfinch is the state bird of New Jersey. When it gets cold, they need to migrate to a warmer place. Their destination is a 1,000 miles away. If the birds fly 50 miles in a day, how many days will it take them to fly to their winter home? What strategy did you use to solve this problem?

5. Sally was in her yard one day when she noticed some beautiful flowers. She noticed that they were Violet's, the state flower of New Jersey. She noticed the yellow center and twelve purple petals. Sally picked three of the flowers and placed them in a vase to bring to school. After two days, Sally noticed

that  $\frac{1}{3}$  of the petals had fallen off. The following day,  $\frac{1}{4}$  of the remaining petals had fallen off. The next day,  $\frac{1}{2}$  of the remaining petals had fallen off. How many petals were left on the flowers?

6. Find all of the possible four digit numbers you can make using a 3, 7, 8, and 9. How many numbers can you make? What is the largest number you can make? What is the smallest number?

7. George was celebrating his tenth birthday with an ice cream party for his friends. He had chocolate, vanilla, and strawberry ice cream. He had chocolate syrup, rainbow sprinkles, chocolate chips, and m&m's for toppings. If each child was allowed to have two scoops of ice cream and one topping, what are all of the different kinds of sundaes that could be made?



8. Patrick and Brendon play on different baseball teams, but sometimes use the same field. Patrick plays at Memorial Field every third game and Brendon plays at Memorial Field every fifth game. If Patrick and Brendon are both playing at Memorial Field today, when will be the next time they will be there on the same day?

9. Michelle went to her friend's house at 1:15 P.M. Her father told her to be home in 1 hour and 45 minutes. What time did Michelle need to be home?

10. What is the area of the shape on the grid?

