SUMMER m + π CHALLENGE

Sample Emails

Below are some sample emails from the Summer Math Challenge. For more information please visit quantiles.com/summer-math.

Grade 1

Real-World Wednesday

Work with your child today to see how math is all around us!

First, print the practice page, “Tens Frames” from the link below. Ask your child to find five numbers in your house that are between 0 and 50. Look on food containers, books, magazines, newspapers, etc. Your child should write each number, show the number using tally marks, and then use the tens frames template or draw tens frames to represent the number.

For example, if your child finds the number 26 ounces on a can, he or she should write the number 26. Next your child should draw tally marks (5 bundles of 5 and 1 extra). Finally, he or she should draw 3 tens frames, completely fill in 2 of them, and fill in 6 of the 10 dots in the third tens frame. Be sure to review your child’s work and provide feedback.

Today's resource(s):

Practice Page

Tens Frames

Grade 2

The Right Place

Welcome to Day 2 of Summer Math Challenge with more place value activities. Today your child will try to make the largest 3-digit number possible. To set up the activity, write the numbers 0 through 9 on cards or on pieces of paper that you have cut apart. Place them face down. Here are the directions your child should follow:

- Pick a card. Decide where you want to put the card - the ones, tens, or hundreds place. Remember, you are trying to make the largest possible number.
- Pick a second card. Decide where you want to put the card - the ones, tens, or hundreds place, in order to make the largest possible number.
- Pick a third card. This will go in the place value that remains.

Here is an example. Your child picks a 7 as the first card and decides to put the card in the hundreds place. He or she then picks a 1 as the second card and puts it in the ones place. Finally, your child picks a 9, and it must go in the tens place. So your child’s number is 791, but that is not the largest number possible that could be made with those three digits; the number 971 is larger. Many times the strategy being used is changed by the last number drawn. Remember, once the card is put in a place value location, it can’t be moved.

Grade 3

Sign of the Times

Real-World Wednesday - work with your child today to see how math is all around us!

Together, use the online practice page. It poses 10 questions about real life. Each answer requires using knowledge of multiplication and division facts. For each question, ask your child whether multiplication or division should be used to find the answer.

After you have completed the online practice page, continue to ask similar questions throughout the day. For example, while driving to the grocery store, ask math questions about the shopping trip. Ask, "If there are 8 popsicles in a box, how many popsicles will I have if I buy 4 boxes?" Your child might also enjoy taking a turn by asking you some math questions. Of course, your child will have to tell you if your answer is right or wrong. Enjoy!

Today's resource(s):

Interactive Activity

Word Problems (Mr. Nussbaum)

Grade 4

Divide and Conquer

Welcome to a new day with new math activities. Your child has already learned that multiplication can be defined as repeated addition. Similarly, division can be defined as repeated subtraction. In today's interactive activity, you and your child will take a closer look at division as repeated subtraction.

Here are the directions your child should follow:

- Click the link below.
- Keep subtracting the same number over and over from a large number. Type the answer and click “Enter.”
- On the right side of the screen, a circular counter will show how many times you have subtracted.
- To the left of the subtraction problem, a model fills up as subtraction is done.

- On the far left of the screen, a list of multiples is shown with each subtraction.
- Have your child stop subtracting once he or she reaches zero.
- Click “Check Answers.”

As you work together, talk about how you can recognize a pattern that will help to determine how many times to subtract before finishing the subtraction. Refresh the page (or close the page and click the link below again) to get another problem to try. Have your child try 10 problems today to reinforce the fact that division can be represented as repeated subtraction.

You and your child can take turns to see who can get the most division problems correct!

Today's resource(s):

Interactive Activities

Subtractor (David Hellam)

Dividerama! (Math Frog)

Grade 5

Divide and Conquer

It’s a new week with a focus on division with fractions. Welcome back.

Division with fractions is sometimes difficult to understand for young students. So for the majority of the week your child will be concentrating on pictures and models that illustrate the meaning of division with whole numbers and with unit fractions. A unit fraction is a fraction that always has a numerator (top number) of 1.

Today your child will watch two videos that explain and model with pictures what it means to divide a whole number by a unit fraction.

Take a few minutes to let your child share what he or she remembers about dividing fractions from the teacher’s instruction during the previous school year. Try to determine if your child understood the explanations with the pictures in the video. Later in the week, your child will be given some word problems to help with understanding when division with fractions is appropriate.

Today's resource(s):

Videos

Use visual models for division of whole numbers by unit fractions (LearnZillion)

Divide a unit fraction by a whole number (LearnZillion)

Grade 6

Real-World Wednesday

Work with your child today to see how math is all around us!

Data analysis is used in sports, such as stats you read on the sports page of a newspaper. It is also used in science such as meteorology (the study of weather patterns). The interactive activity today will pose real world problems that require finding the mean, median, or mode. Here are the directions your child should follow.

- Have paper and pencil ready.
- Click the link below.
- Read each question and work out the answer on your paper.
- After you finish, click the “Answer” link to determine whether you are correct.

Share and discuss with your child examples in other areas of your daily life where data is analyzed. Some suggestions for discussion are listed below:

- polls or surveys that ask peoples’ opinions
- games with spinners or numbered cubes
- insurance premiums that are based on data that include healthy choices or age of a person
- your child’s grades at school, which are found from the data of his or her performance in their classes.

There are so many more real-life situations where data is used that we are sure you will notice more throughout the coming weeks.

Today's resource(s):

Interactive Activity

Practice with Mean, Mode, Median (Oswego City School District Regents Exam Center)

Grade 7

Welcome back to another day of Summer Math Challenge. This week your child has been working with unit rates. Remember that a unit rate is a type of ratio. Today’s activities are about a special ratio called the Golden Ratio. Many designs in nature, art, architecture, science, and mathematics use the Golden Ratio.

Take a few minutes to watch the video with your child. It summarizes the meaning and the value of phi, which is the name for the Golden Ratio.

After watching the video, have your child complete the interactive activity “The Golden Ratio Project.” Here are the directions your child should follow:

- Click the link below.
- In the “Materials Required” section, click the link for the “Student Work Page.”

- Print the Student Work Page, which shows the body parts to measure. Have a tape measure or ruler handy, as well as a calculator.
- Enter your name in the table. Follow the steps outlined on the page and record your results in the table.
- For each step, measure two lengths and then divide to write the ratio.

To make the activity even more fun, have your child also get your measures or the measures of a brother, a sister, or a friend. Repeat the steps to see how close the ratios come to the Golden Ratio of 1.618.

Today's resource(s):

Video

Golden Ratio (YouTube: Bricke321)

Interactive Activity

The Golden Ratio Project (Adventure of the American Mind)

Grade 8

Coming soon!

The Summer Math Challenge is brought to you by: QUANTILE THE QUANTILE FRAMEWORK FOR MATHEMATICS