

# Summer Activity Packet for Incoming 7th Graders



This five week Summer Activity Packet contains links to video resources as well as some concepts and topics that students should be familiar with. This resource is designed to help students review concepts and skills to ensure their readiness for the next grade level. Please encourage your student to do the best they can with this content—the most important thing is that they continue developing their mathematical fluency and skills! During the course of your math work this summer, you may need some assistance with deepening your understanding of the skills and concepts. Here are some sites you can visit online:

<https://www.engageny.org/>

<https://www.khanacademy.org/>

<https://www.mathantics.com/>

<https://www.mashupmath.com/>

<https://www.thatquiz.org/>

# WEEK 1

## Ratios & Proportional Relationships

*Standards 6.RP.1-6.RP.3: Understand ratio concepts and use ratio reasoning to solve problems.*

1. Find five examples of ratios in the real world. Write them down and describe the situation in which they are found. \*Remember, ratios are comparisons of two quantities which can be written in the following ways: 1) a to b 2)  $a/b$  3)  $a : b$  Example: At the grocery store, Brandi noticed that there were three times as many carts as there were baskets for shoppers to use to carry their food. The ratio of carts to baskets ( $c : b$ ) is 3 to 1.

1.

2.

3.

4.

5.

2. Create a problem using ratios for your parents/guardians or friends to solve. Write both your problem and solution here.

## WEEK 2

### Number System Standards

*6.NS.1-6.NS.3: Apply and extend previous understandings of multiplication and division to divide fractions by fractions.*

1. Chef Emerald had a recipe that called for  $\frac{3}{4}$  lb onions and  $\frac{1}{3}$  lbs of pork. He was preparing the recipe for a special event and needed to quadruple it to make enough for all of his guests. How many pounds of onions and pounds of pork would he need for the recipe? Show all work.

2. Create a problem about the estimated cost of ingredients for the recipe if onions cost \$2.99/lb. and pork costs \$5.49/lb. Include both an estimated solution and an exact solution.

# WEEK 3

## Expressions & Equations

*Standard 6.EE.6: Use variables to represent numbers and write expressions when solving a real-world or mathematical problem.*

1. Kristin was given \$100 for her birthday. She spent some money on a new pair of headphones. Write an expression using a variable that can represent this situation.
  
2. Deon was offered a job at the nearby recreation center. The owner offered him \$600 per week or \$50 the first day and agreed to double it for each following day. • How could Deon make the most money? • Which deal should he accept and why?
  
3. Create three real-world mathematical problems involving variables to represent unknown numbers. \*Be sure to create an answer key with explanations of how to solve each of your problems\*

# WEEK 4

*\*You will need graph paper*

## Geometry

*Standard 6.G.3: Draw polygons in the coordinate plane given coordinates for the vertices.*

1. Use the following set of coordinates to create a graph on graph paper.

A. (6, 1) B. (2, 4) C. (-5, 4) D. (-1, 1)

Name the figure: \_\_\_\_\_

2. Use the following set of coordinates to create a graph on graph paper.

A. (3, 3) B. (-1, 3) C. (-4, 0) D. (-1, -3) E. (3, -3)

Name the figure: \_\_\_\_\_

3. On graph paper draw your own coordinate plane. Label the X and Y axis.
4. Choose a room in your house and study the arrangement of the furniture.
5. Measure the dimensions of at least four pieces of furniture in the room you chose.
6. Create a scale, and then graph the pieces of furniture on your coordinate plane. (For example 5 feet =  $\frac{1}{2}$  inch)
7. Write directions using your coordinate plane and furniture model. Give them to a parent to see if they can complete a transformation of the furniture according to the directions and scale model you created.

# WEEK 5

## Number System

*Standard 6.NS.4: Find the greatest common factor of two whole numbers less than or equal to 100, and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers, 1-100, with a common factor as a multiple of a sum of two whole numbers with no common factor.*

1. Find the Greatest Common Factor of: 6, 18, and 24 \_\_\_\_\_
  2. Find the Greatest Common Factor of: 5, 25, 60 \_\_\_\_\_
  3. Find the Greatest Common Factor of 12, 42, 72 \_\_\_\_\_
  4. Find the least common multiple of 6 and 15 \_\_\_\_\_
  5. Find the least common multiple of 25 and 200 \_\_\_\_\_
  6. Find the least common multiple of 8 and 5 \_\_\_\_\_
7. The florist can order roses in bunches of one dozen and lilies in bunches of 8. Last month she ordered the same number of roses as lilies. If she ordered no more than 100 roses, how many bunches of each could she have ordered?
8. What is the smallest number of bunches of each could she have ordered? Explain your answer.
9. A farmer is putting apples and oranges into boxes to sell at a market. He has 64 apples and 24 oranges. What is the greatest number of boxes he can make using all of the apples and oranges if each box has identical contents?