THE COMMISSIONER'S
2025 SUMMER
MATH
CHALLENGE

Family Learning Beach

Imagine you wanted to build a sandcastle with a volume of 48 cubic inches.

- What could be the length, height, and width of your sandcastle?
- If you decide to make it larger and double each dimension, what would be the volume now?

Family Learning Farmer's Market

The farmer is going to separate 40 pounds of blueberries into nine containers equally by weight. How many pounds will each container have?

Family Learning Gardening

You are creating a vegetable garden at home. The dimensions of the garden are 3 ½ yds. by 4 yds.

- What is the area of your garden?
- What vegetables could you get from your local garden center for your garden?
- How many of each vegetable and how far apart would you have to plant them?
- Plants usually come with tags that provide information about their growth and needs. Create a representation of how you would plant the garden. *(If you are unable to visit a garden center, you can research information about vegetable plants.)*

Family Learning Walk or Hike

Find out what the distance will be for today's walk or hike. How far will you go if you walk halfway? How far will you go if you walk 2/3 of the way?

Family Learning Ice Cream Shop

Visit your local ice cream shop and do some price comparisons.

1. How much would it cost to buy a quart of your favorite flavor?
2. How about if you wanted to buy different flavors so you purchased a quart, but in individual pints?
3. Do they sell ice cream by the cup? How much would it cost to buy a quart, but all in individual cups?

(If you can't get to an ice cream shop, try this problem with your local grocery circular.)

CONNECTICUT Education

CCLM CONNECTICUT COUNCIL OF LEADERS OF MATHEMATICS

Family Learning Movement

Draw a numberline outside with wide even spacing with values between 0–5, marking fractions or decimals between each whole number (e.g., 0, .5, 1, 1½, 2, etc.).

- Pick a number to start on. Take turns calling out directions like add or take away 3.75. What do you notice about the distance between you and your partner when you are both traveling the same distance as the same time? Does the distance between you both stay the same, or change? Why do you think so?

- Take turns calling out directions like triple your number or halve your number. What do you notice about the numbers as you continue to double them? Cut them in half? Cut them into thirds?

- Double, triple, or quadruple your number by hopping, skipping, or jumping along the numberline. Does the distance stay the same between you and the other players? Why or why not?

- What else do you notice when you keep on doubling your numbers? How does it compare to tripling?

Draw a numberline outside with wide even spacing with decimal values of tenths between 0–2.

- Write 2- or 3-digit decimal numbers (0.25, 1.03, 1.57, etc.) on cards and turn them face down or have a family member call out a number. Find the best spot on the number line where you think the number belongs, mark it with an X and stand there. Is it closer to 0? 1? 2? How do you know?

- Numberline relay: Write a bunch of 3 digit decimal numbers on pieces of paper (index cards, etc.). Mix them all up and put them on a starting spot off the numberline. Flip up a card and race to place the card where you think the number belongs. Then run back and get another card. This can be played in teams so that kids need to think about where the numbers are being placed compared to their opponent's.

Create a coordinate grid rather than a number line by drawing two intersecting number lines at a right angle.

- Decide where to stand and take turns calling out directions either by calling coordinate pairs or by adding or subtracting along the x,y (horizontally or vertically).

- What do you notice about your position when you add 1 to each ordered pair? (1,1), (2,2), (3,3)?

- Trace your movements with a different colored chalk. What do you notice?

- What happens if you multiply your ordered pairs?

Create a design on a piece of paper and map it out on your coordinate grid. Have a family member call out the coordinates as you mark the points. Then connect them. You just replicated a giant version of your design!

Treasure Map:
Create a coordinate grid of your yard on a piece of paper. Mark points on your paper grid where you want your treasures to be. Then, place "treasures" or secret messages on points in your yard. They can be notes, plastic eggs, rocks, etc. Then, see if a family member can find your secret treasures by following your coordinate grid.

Family Learning Playground

Playground mulch should be at least 1 foot thick to prevent injuries if children should fall from the playscape. Head to your local playground and measure or estimate the length and width of the playscape. If you were to fill this area with 1 foot of mulch, how much mulch would you need in cubic feet?