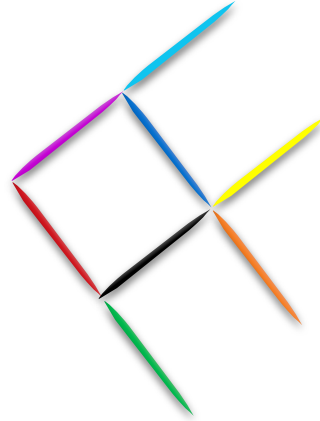


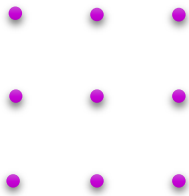
I. Toothpick Challenge

Turn the fish around by moving only 3 toothpicks. No overlapping the toothpicks. Do not move the green toothpick.



II. Connect With Four

Without lifting your pencil, can you connect all of the dots below with four straight lines?



Problem Solving Tip:

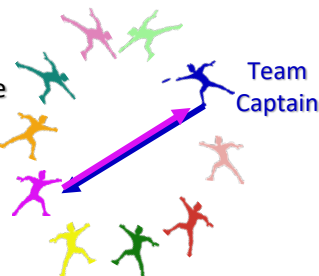
III. Ultimate Practice

Ultimate is a sport originally known as ultimate frisbee. It is a game played with two teams that toss the flying disc from team member to team member with the goal of getting past the end-line to score a point.



The blue team likes to challenge themselves during practice. The team of ten members stands around the field in a circle. The team captain starts by calling out a number (x). The frisbee is then passed to the person x places clockwise around the circle. That person then passes it to the person that is x spaces away from them. If the team passes the frisbee to everyone and returns it to the team captain before anyone else receives it twice, the team takes a water break. If they do not, then they run a lap around the field.

For Example: If the captain calls out "5" the frisbee is thrown to the 5th person to his right (clockwise). The purple person throws it to the fifth person to his right, which is back to the team captain. Only two team members touched the frisbee, therefore they need to run a lap.



What numbers can the captain call out that result in a water break?

IV. Modifying the Goat Pen

Farmer Bob is modifying a dog pen. The pen is a rectangle with length=4 feet and width=3 feet. The area is too small for the dogs. He decided to double the length.

Draw the original dog pen (Label the length and width):

What was the area of the original dog pen? (length=4 and width=3) _____

What is the new length? _____

Draw the larger dog pen. Label the length and width.

What is the area of the larger pen? _____

V. Missing Operations

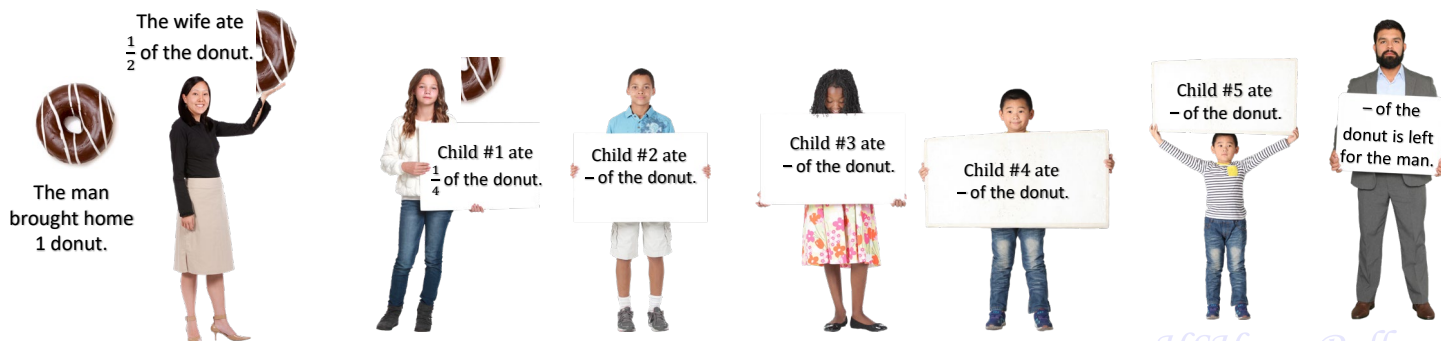
Choose the operations to make a true equation.

The operation choices are: addition(+), subtraction(-), multiplication(x), division(/)

$$3 \text{ ____ } 7 \text{ ____ } 8 \text{ ____ } 1 \text{ ____ } 2 = 3$$

VI. The Family Donut

One evening a man brought home one donut. He told everyone they can have $\frac{1}{2}$ of whatever is left of the donut. He cut the donut in half and gave the first piece to his wife. If each of the 5 children took a turn eating one-half of the **remaining amount**, then how much donut is left in the box for him (he gets the remaining amount) to eat after all the other family members ate their portion? (Hint: his wife eats $\frac{1}{2}$ of the donut. The first child eats $\frac{1}{4}$ of the donut.)



IV. Practice

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2

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4

5

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