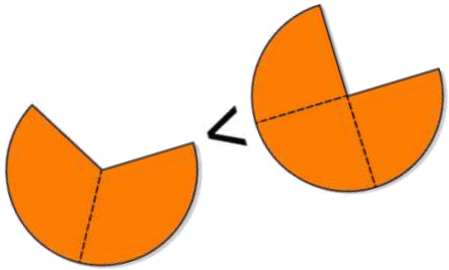
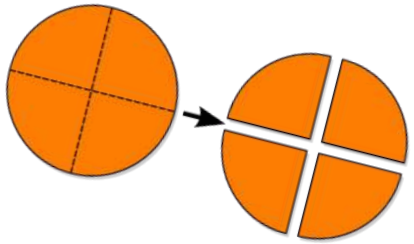
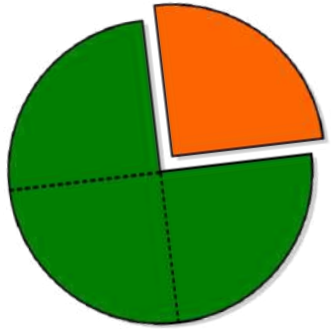




Fraction Number Talks

Grade 5



Number Talks

Number talks are a short (5-10 minute) daily routine in which students

- Practice mental math (no paper/pencil)
- Build mathematical communication through expressing their own reasoning
- Share/clarify/consider classmates' thinking
- Strengthen conceptual understanding and procedural knowledge

Tips for Number Talks can be found here: http://bit.ly/2fyZiqM

Using this Slide Deck

This slide deck is intended to support your ongoing math instruction. It was built with a progression of skills in mind. There are multiple versions of each type of problem so that students can have multiple opportunities on different days to build upon old learning and develop new ideas.

- Choose only one problem per day
- Go in order or jump around: Choose problems that your students could best use in developing their thinking.
- Feel free to make a copy of this deck to your Google Drive
    - If you design any additional slides that you think others would enjoy please contact the coaches.

The Wishing Club

If three friends each made a wish and

- Friend 1 got ½ of her wish granted
- Friend 2 got ¼ of her wish granted

and

- Friend 3 got ¼ of her wish granted,

How many wishes would the three friends have altogether? How do you know?

Making Smores

Nick and Tasha need chocolate bars to make S'mores.
Nick likes to use ½ of a chocolate bar.
Tasha will only eat a s'more that is made with exactly 2/5 of a chocolate bar.

What fraction of the chocolate bar will they use in total if they each eat a s'more?

Making Smores

Nick and Tasha need chocolate bars to make S'mores.
Nick likes to use ½ of a chocolate bar.
Tasha will only eat a s'more that is made with exactly 2/5 of a chocolate bar.

Nick wants to cut the chocolate bar into equal pieces. How many pieces should he cut the bar into so that each of them get the right amount of chocolate?

Making Smores

Nick and Tasha need chocolate bars to make S'mores.
Nick likes to use ½ of a chocolate bar.
Tasha will only eat a s'more that is made with exactly 2/5 of a chocolate bar.

Nick wants to cut the chocolate bar into equal pieces. How many pieces should he get? How many pieces should Tasha get?

Making Smores

Nick and Tasha need chocolate bars to make S'mores.
Nick likes to use ½ of a chocolate bar.

This chocolate bar is broken into tenths.

If Nick uses ½ of the bar will he be able to make another s'more?

Making Smores

Nick and Tasha need chocolate bars to make S'mores.
Tasha will only eat a s'more that is made with exactly 2/5 of a chocolate bar.

The chocolate bar below is broken into tenths.

If Tasha uses only ⅖ of the chocolate bar will she be able to make another s'more?

Making Smores

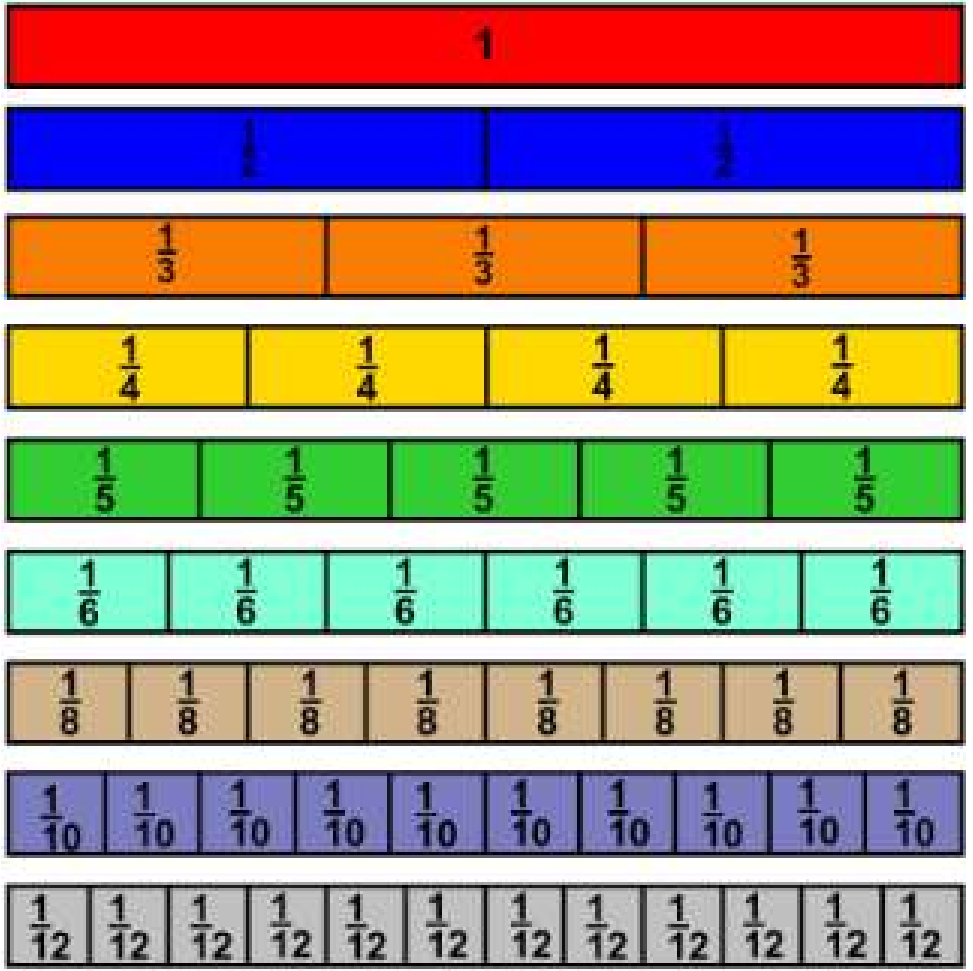
Nick and Tasha need chocolate bars to make S'mores.
Tasha will only eat a s'more that is made with exactly 2/5 of a chocolate bar.

The chocolate bar below is broken into tenths.

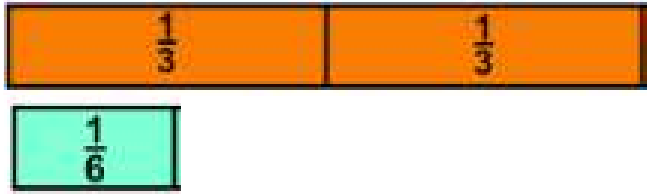
Can Tasha make 3 s'mores?

Adding Fractions

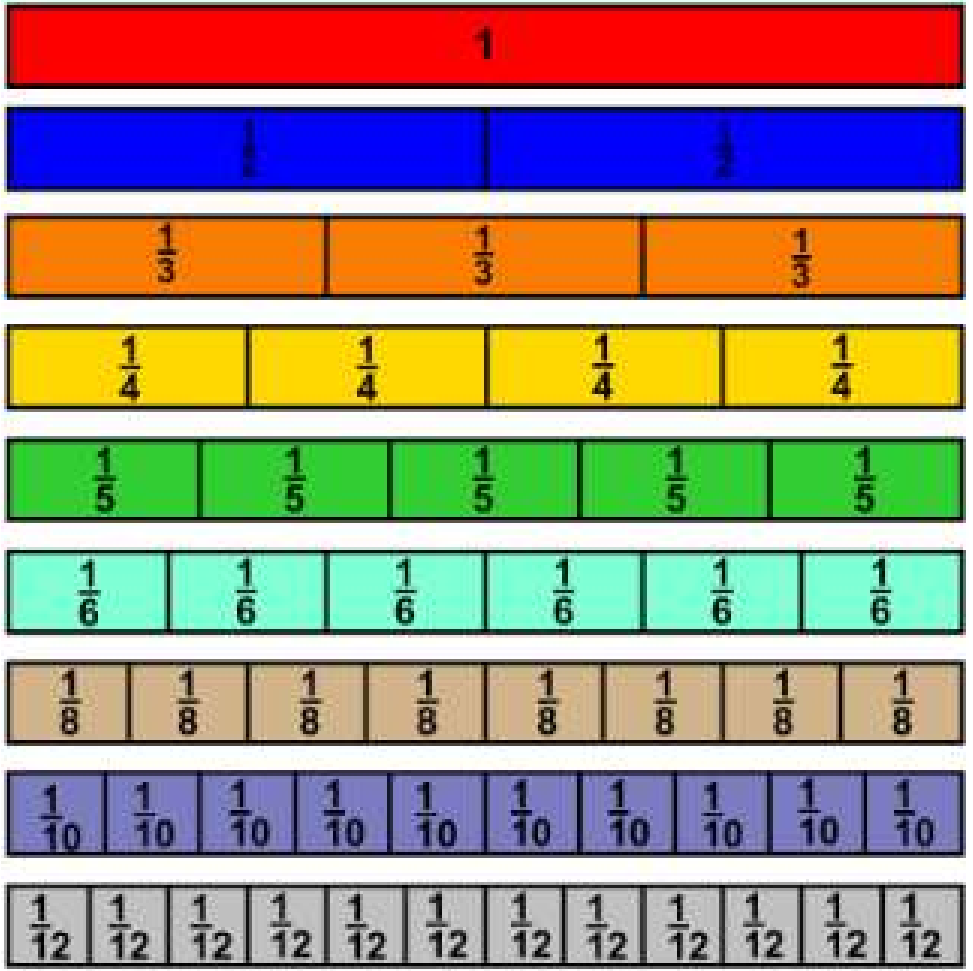
$\frac{2}{3} + \frac{1}{6}$



Subtracting Fractions

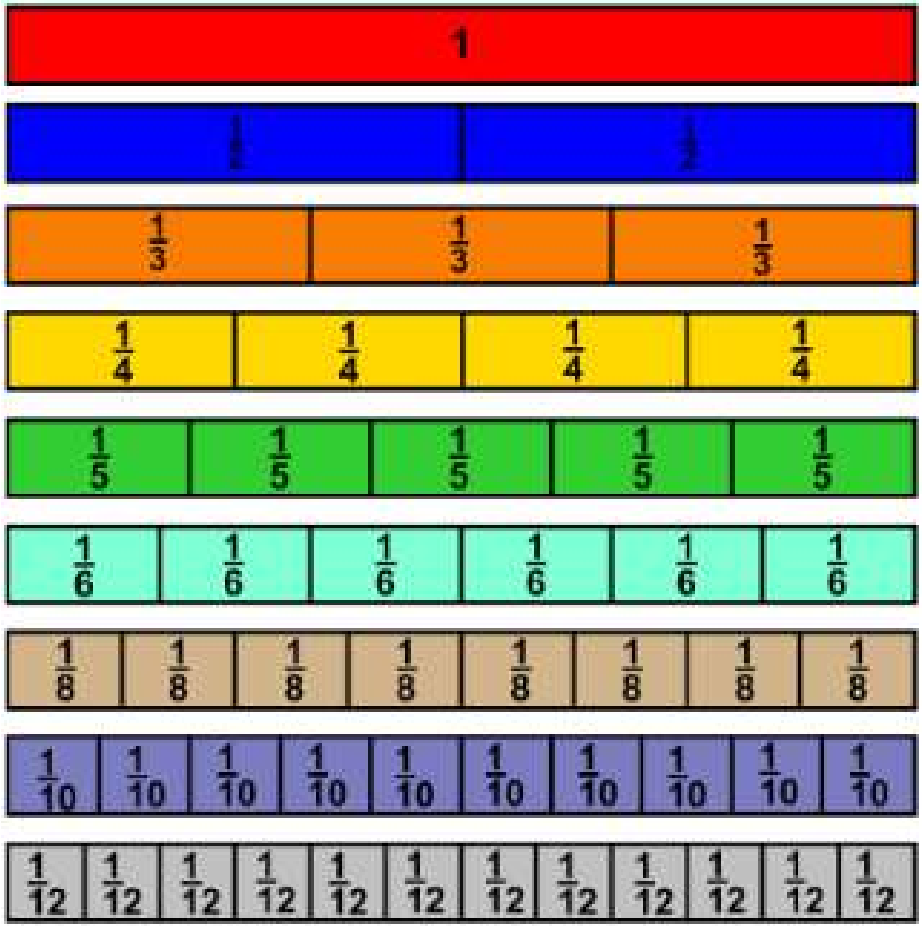


$\frac{2}{3} - \frac{1}{6}$

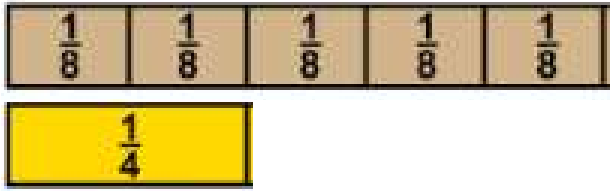


Adding Fractions

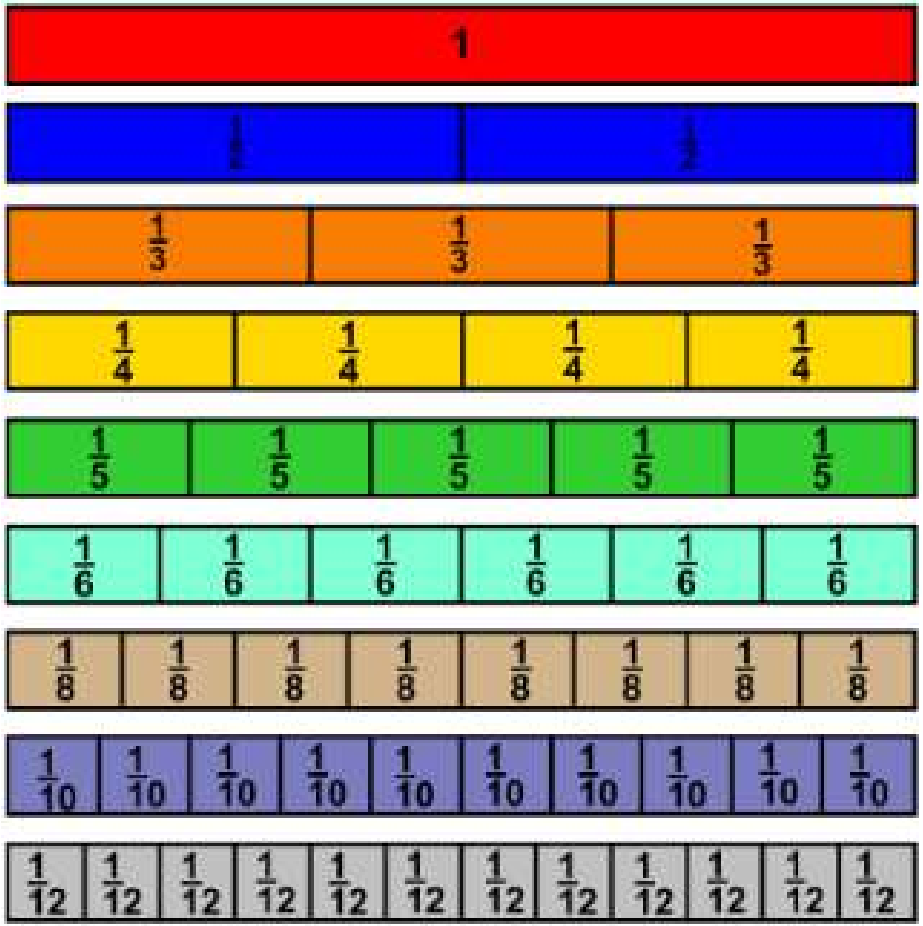
$$\frac{5}{8} + \frac{1}{4}$$



Subtracting Fractions

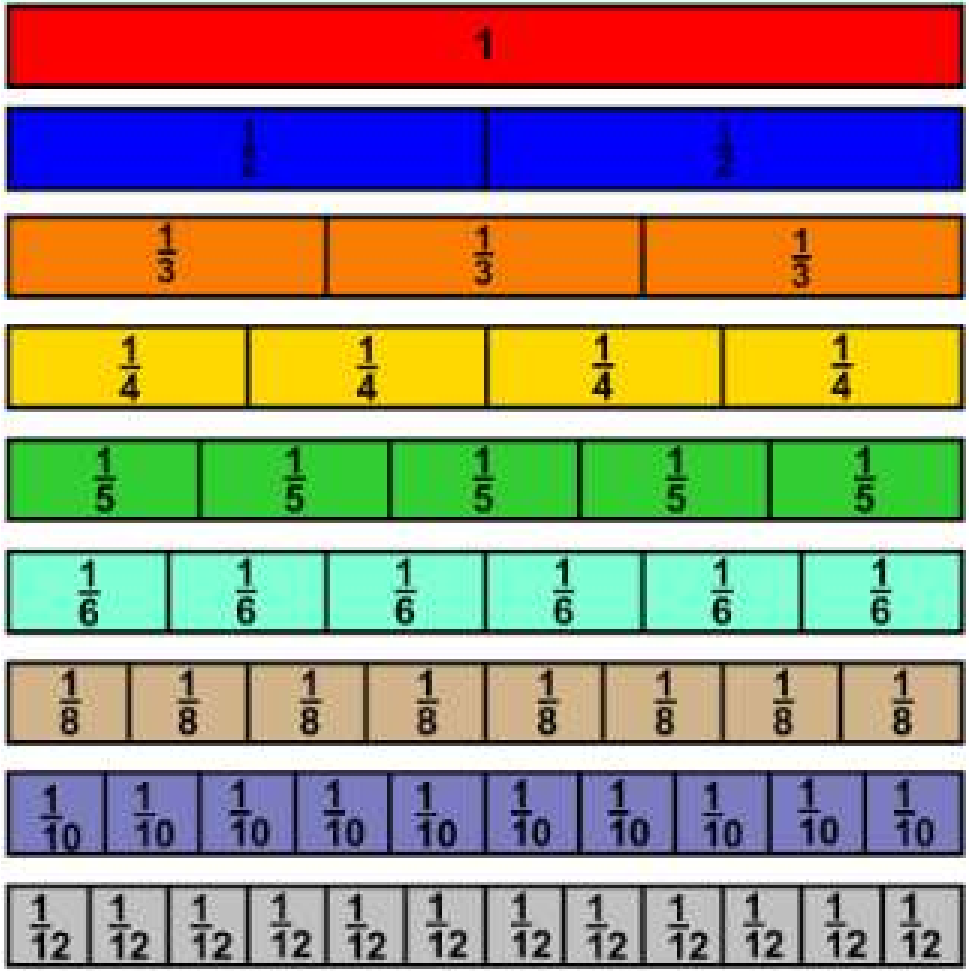


$\frac{5}{8} - \frac{1}{4}$

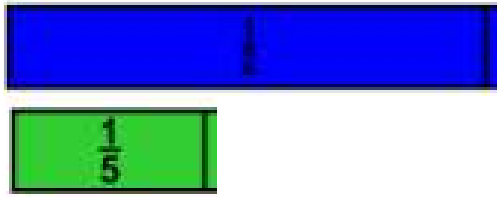


Adding Fractions

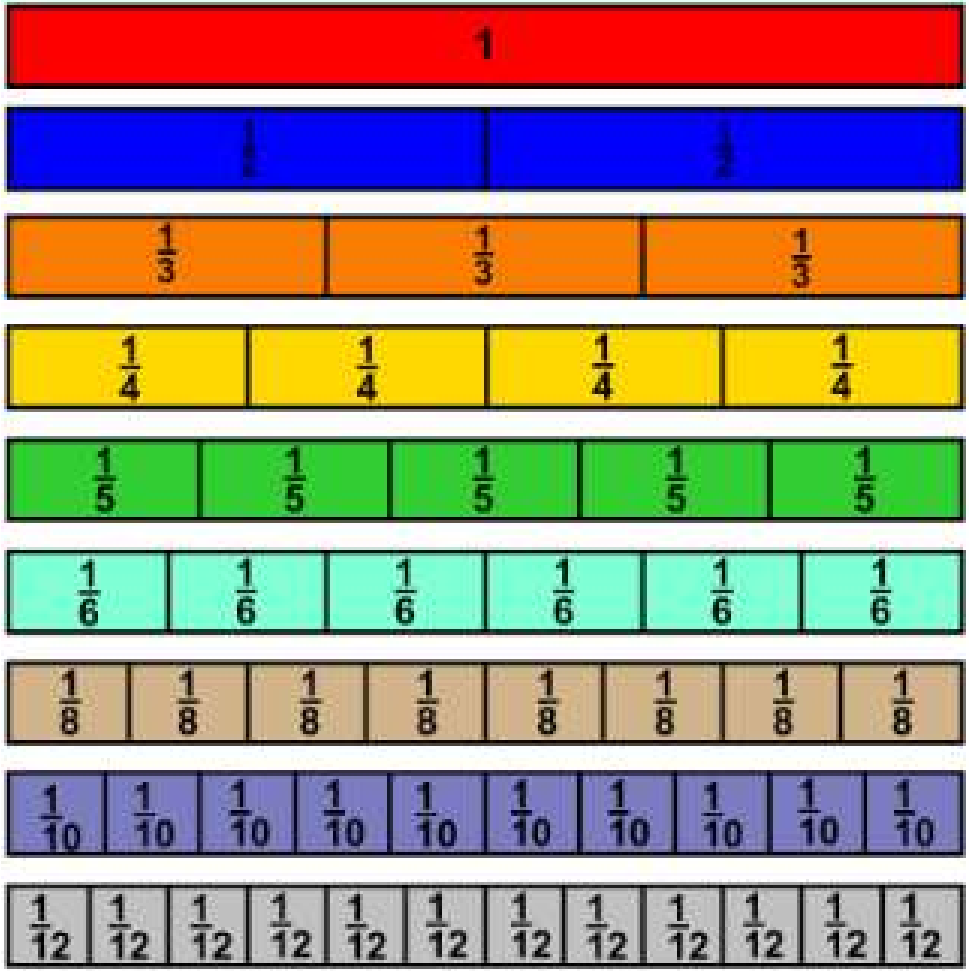
$$\frac{1}{2} + \frac{1}{5}$$



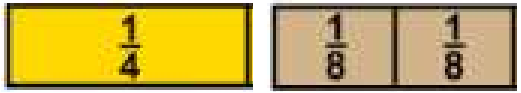
Subtracting Fractions



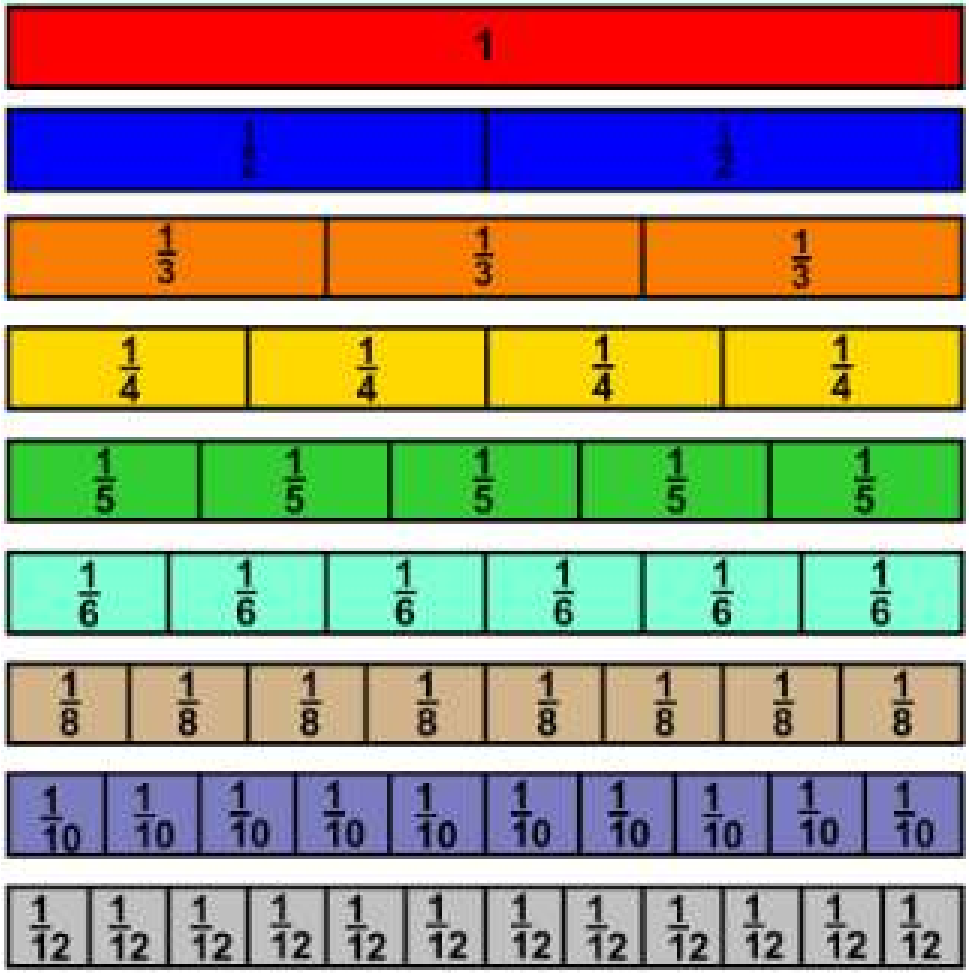
$\frac{1}{2} - \frac{1}{5}$



Adding Fractions



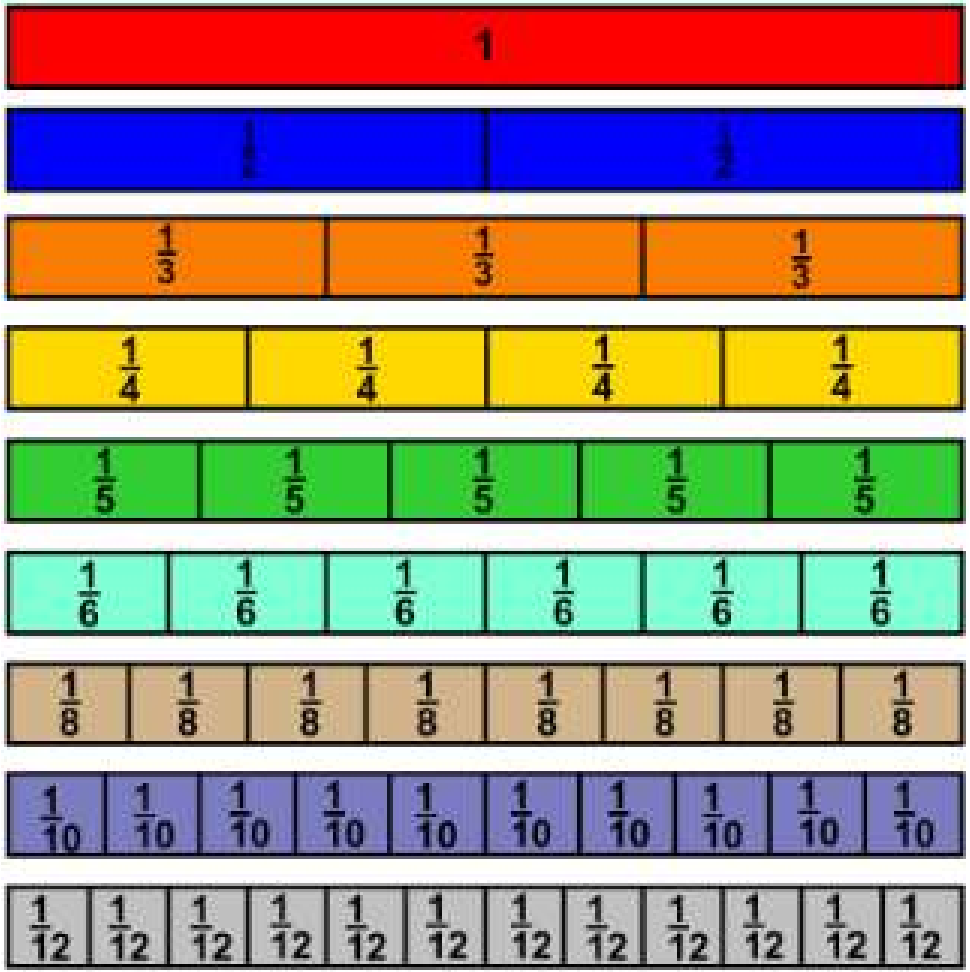
¼ + 2/8



Adding Fractions

Maya makes trail mix by combining ⅓ cup of nuts, and ⅙ cup of Chex cereal.

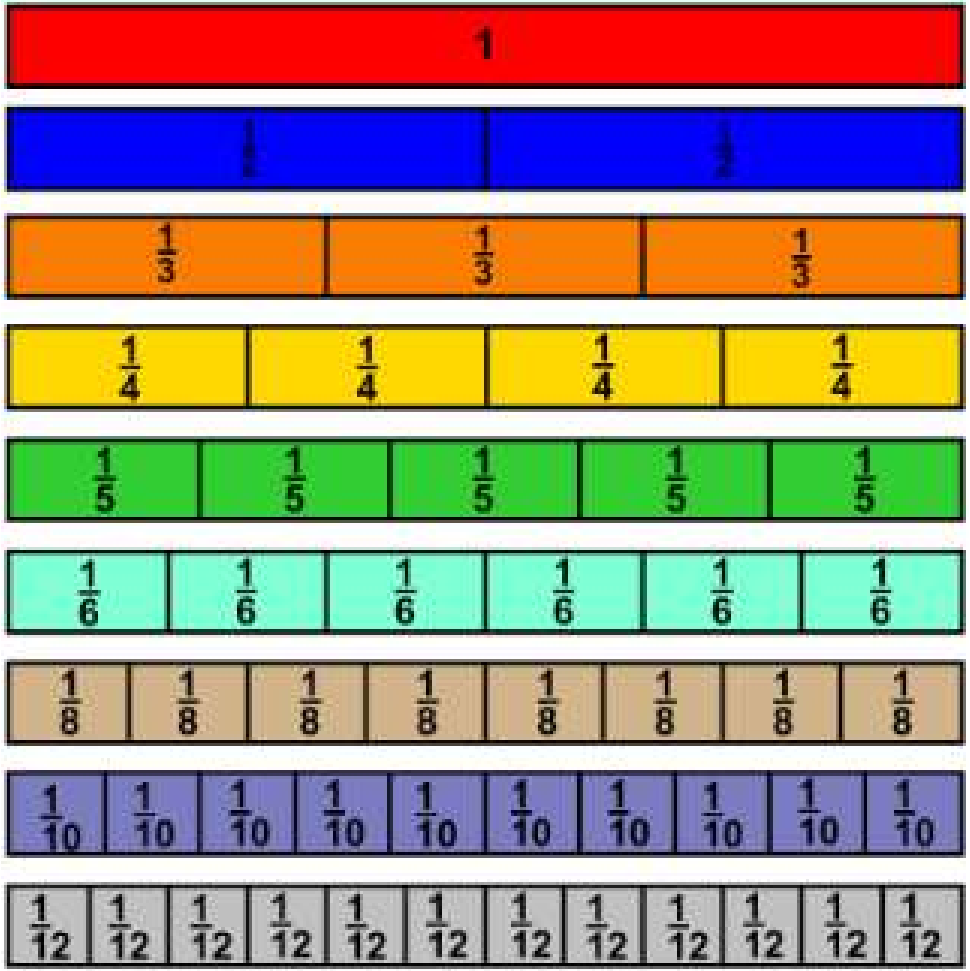
How much trail mix did she make?



Adding Fractions

Maya makes trail mix by combining ⅓ cup of nuts, ¼ cup of dried fruit and ⅙ cup of chocolate morsels.

How much trail mix did she make?



Finding Common Denominators

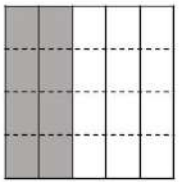
What does this rectangular fraction model and the multiplication method have in common when finding a common denominator?

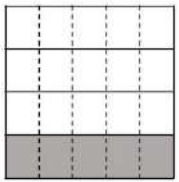
Rectangular Fraction Model

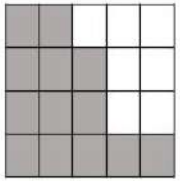
Multiplication Method

13/20

⅖ + ¼







⅖ x 4/4 = 8/20

¼ x 5/5 = 5/20

Finding Common Denominators

How can you use the multiplication method to find a common denominator?

Use the common denominator to add the fractions:

$$\begin{array}{r} \frac{3}{4} \\ +\ \frac{5}{6} \\ \hline \end{array}$$

Finding Common Denominators

What are some common multiples that could be used to find a common denominator for these two fractions?

$$\frac{5}{8} - \frac{1}{3} =$$

Use one of the common denominators you found to find the equivalent fraction and then subtract.

Finding Common Denominators

Use the common multiples method to find the common denominator for these two fractions?

Use the common denominator you found to add the fractions:

$$\begin{array}{r} \frac{4}{8} \\ +\ \frac{1}{2} \\ \hline \end{array}$$

Adding/Subtracting Fractions with Unlike Denominators

Choose a method to solve the equation below. Describe the method you chose.

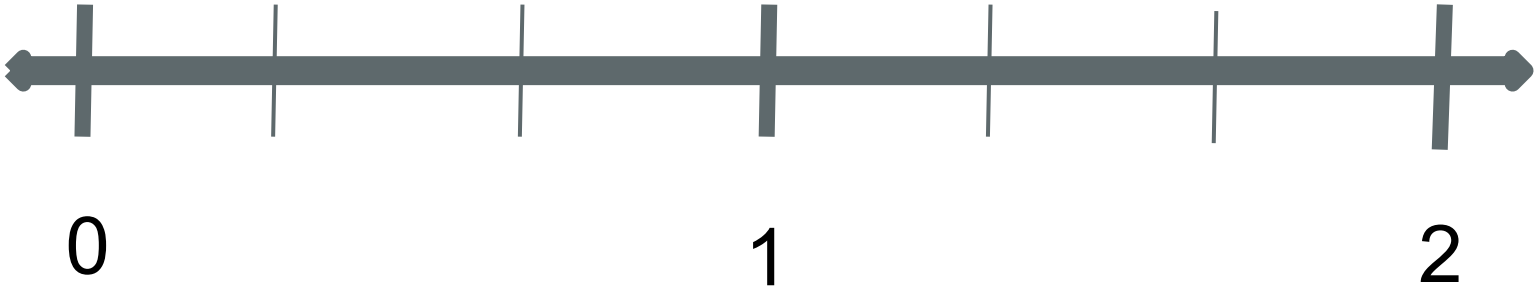
$$4/9 + 5/7 =$$

Solve this problem using a visual model.

$$\frac{1}{4} + \frac{2}{3} = ?$$

Use the number line to solve the problem

$\frac{2}{3} + \frac{1}{2}$?

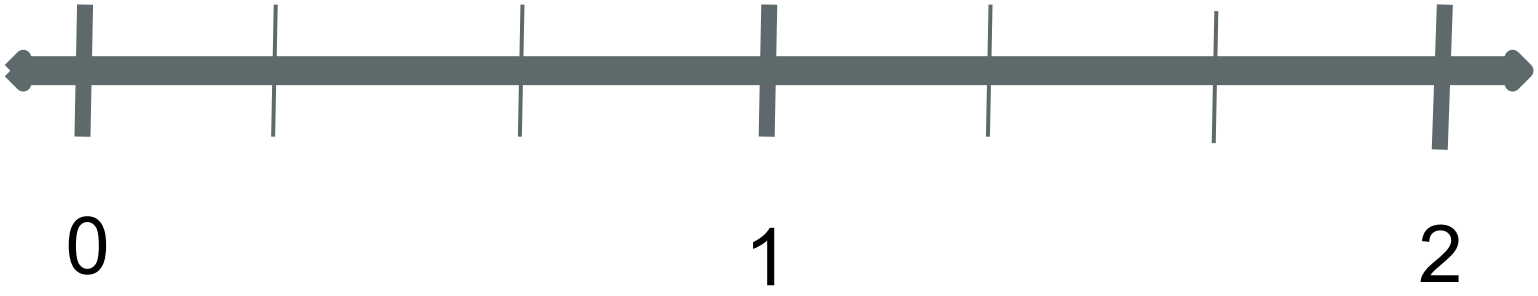


Solve this problem using a visual model.

$$\frac{3}{4} + \frac{1}{8} = ?$$

Use the number line to solve the problem

5/6 + 2/9 ?

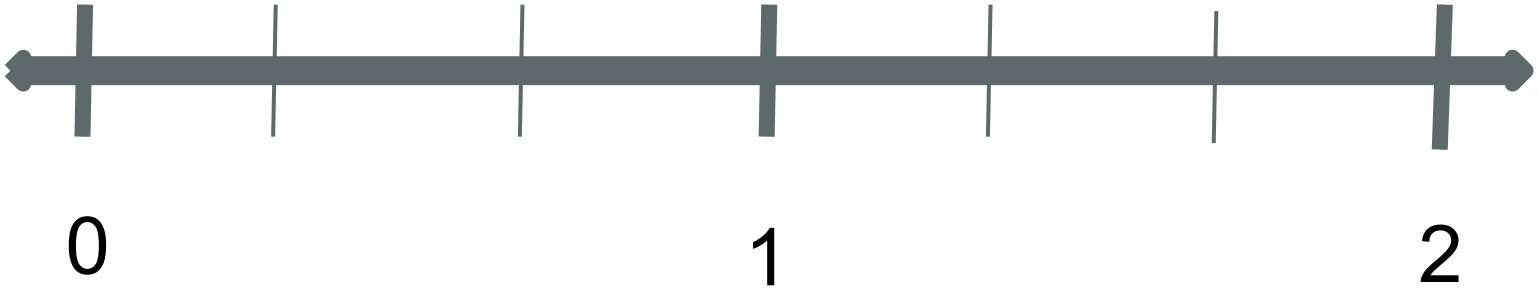


Solve this problem using a visual model.

$$2\frac{3}{4} - 1\frac{4}{8} = ?$$

Use the number line to solve the problem

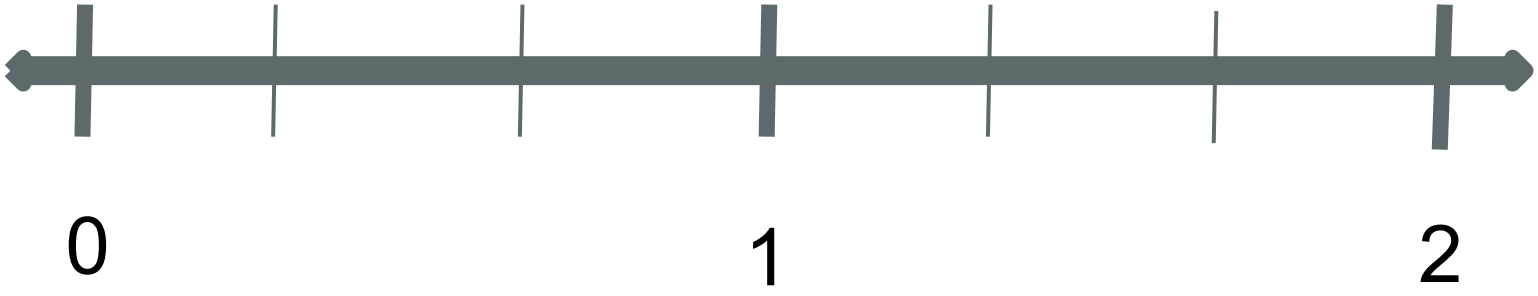
2/9 + 1 ⅓ ?



Solve this problem using a visual model.

$$1\,2/9 + 2\,5/6 = ?$$

Use the number line to solve the problem 1 5/6 - ⅔ ?

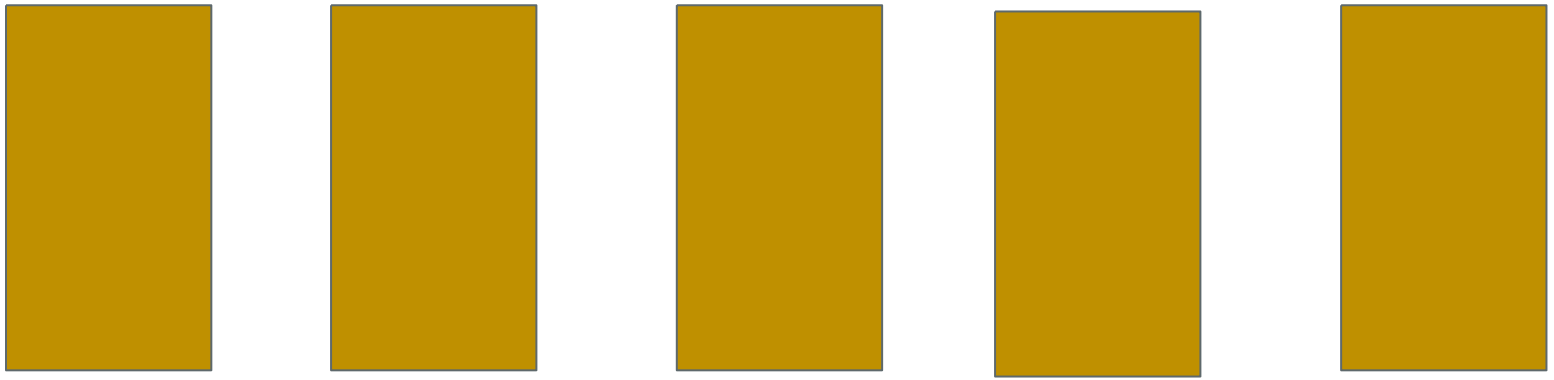


Solve.

Laura has 5 pies that she wants to equally share with herself and her 7 guests.

Solve. Model the problem using the rectangles.

Fred, Jorge, and Juan are each building a fence. Between them, they have 5 pieces of wood. If they share the wood equally, how much wood will each person get?



Draw a visual model to represent the problem and solve.

A bowl holds 4 cups of rice. If I use a measuring cup that holds ⅛ of a cup, how many times will I need to fill the measuring cup in order to fill the entire bowl?

Explain your visual model.

Draw a visual model to represent the problem and solve.

Janet had a rope that was 2 meters long? She cut it into pieces that were ⅓ of a meter long. How many pieces of rope did Janet cut?

Explain your visual model.

Draw a visual model to represent the problem and solve.

A jug of water is ½ full. If 3 children equally share the water, what fraction of the full jug does each child get?

Explain your visual model.

Draw a visual model to represent the problem and prove it using the related multiplication problem.

Karen has ⅓ of her birthday cake left. Her and her 4 friends want to share the rest of the cake equally. How much of the total cake will each friend get?

Prove your answer using the related multiplication problem.

Represent with a visual model and equation.

Two pizzas were cut into slices. Each slice equaled ⅕ of the whole pizza. How many fifths were there all together?

Why will the quotient be a whole number?

Represent with a visual model and equation.

For lunch, Anthony had ⅕ of a whole pizza leftover from the night before to eat. His friend, Carl, asks him to share it with him. How much of the whole pizza will each boy get?

Why will the quotient be less than 1?

Represent with a visual model and equation.

7 divided by 2

Two friends went out to pizza. The pizza came sliced into 7 equal slices. How many slices of pizza will each friend get if they share it equally?

Why will the quotient be a mixed number?