

Fraction Number Talks

▪ Skip Counting by Fractions

- Example: Start at 0 and count by $\frac{1}{4}$'s. Teacher records fractions as students say them. Once fractions on board, discuss patterns and other discoveries.
- Days of the week
 - What fraction of a week is Tuesday?
 - If three-sevenths of the week has passed, what part of the week remains?

▪ Comparing fractions

- Place the following numbers on a number line:

- $\frac{1}{3}, \frac{1}{8}, \frac{1}{10}, \frac{1}{5}$
- $\frac{5}{6}, \frac{2}{3}, \frac{3}{9}$
- $\frac{3}{8}, \frac{5}{7}, \frac{1}{2}$

* Or students can line up holding cards and then explain their thinking to why they stood where they stood.

- **Which is less, how do you know?** Give one or more reasons. Do NOT use common denominators or cross-multiplication.

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| <ul style="list-style-type: none"> ▪ $\frac{1}{8}$ or $\frac{7}{8}$ $\frac{4}{7}$ or $\frac{5}{7}$ $\frac{5}{3}$ or $\frac{5}{8}$ $\frac{4}{5}$ or $\frac{4}{9}$ $\frac{3}{4}$ or $\frac{9}{10}$ | <ul style="list-style-type: none"> ▪ $\frac{7}{12}$ or $\frac{5}{12}$ $\frac{3}{5}$ or $\frac{3}{7}$ $\frac{9}{8}$ or $\frac{9}{10}$ $\frac{4}{6}$ or $\frac{7}{12}$ $\frac{8}{9}$ or $\frac{7}{8}$ |
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- **Comparing to one-half**

- Place these fractions in the chart below:

$\frac{3}{10}, \frac{3}{4}, \frac{11}{12}, \frac{2}{7}, \frac{1}{3}, \frac{5}{10}, \frac{9}{14}, \frac{4}{6}, \frac{3}{12}$

Less Than $\frac{1}{2}$	More Than $\frac{1}{2}$
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- **Equal Sharing Problems** – Pose a problem to the class and let them solve any way they know how. Have students come up and share different strategies. Start with easier problems (sharing a given amount with 2 or 4) and then move to different share amounts as students develop more ideas on how to solve.
 - Julian and his sister have 7 cookies. How many cookies would Julian get if he and his sister shared the cookies equally?
 - 8 people want to share 5 pizzas so that each person gets the same amount. How much pizza would each person get?
 - 16 kids need to share 12 pounds of clay. If they share the clay equally, how much clay would each kid get?
- **What fraction is shaded?** Provide a picture with a random amount shaded. Have students estimate what fraction that is. (see handouts)
- **How many $\frac{1}{4}$'s are in 4?** (or 5, or 6, or 10, or 100)?
 - How many thirds, fifths, or sixths are in 4 (or 5, or 6, or 100)?
 - What patterns do you see?
- **How many different ways** can you show $\frac{1}{2}$? $\frac{2}{3}$?

- **Which one of these things is not like the other?**

$\frac{7}{8}$	$\frac{4}{5}$
$\frac{4}{12}$	$\frac{9}{11}$

$\frac{5}{10}$	$\frac{3}{6}$
$\frac{1}{2}$	$\frac{2}{8}$

- **Number of the Day:** $\frac{5}{8}$
 - Come up with at least 2 different expressions that equal the number of the day.
- **Listing Fractions.** Everyone gives a different fraction that is ...
 - Equivalent to $\frac{1}{2}$ (or any other fraction)
 - Less than $\frac{1}{2}$ (or any other fraction)
 - More than $\frac{1}{2}$ (or any other fraction)

- **Estimating Fractions** – Estimate each problem without using paper or pencil

- $\frac{12}{13} + \frac{7}{8}$

$$3\frac{1}{8} + 2\frac{4}{5}$$

$$\frac{9}{10} + 2\frac{7}{8}$$

$$1\frac{3}{5} + 5\frac{3}{4} + 2\frac{1}{8}$$

- $6\frac{1}{4} - 2\frac{1}{3}$

$$\frac{11}{12} - \frac{3}{4}$$

$$3\frac{1}{2} - \frac{9}{10}$$

- **Strings with Fraction Addition and Subtraction** – Pick one string to work with. Then present one problem at a time, have students discuss, then put the next problem up. Encourage students to connect understanding from the previous problem(s) to the new problem.

- $2 + 3$

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

$$7 + \frac{6}{11}$$

$$4 - \frac{1}{3}$$

$$10 - \frac{7}{8}$$

- $8 + 9 + 2$

$$\frac{1}{5} + 4 + \frac{2}{5}$$

$$3 + \frac{7}{10} + \frac{4}{10}$$

$$4 - \frac{7}{10}$$

$$5 - \frac{9}{10} + \frac{2}{10}$$

- **Strings with Fraction Multiplication and Division**

- $9 \div 3$

Talk with your partner, what does this problem mean? What is it asking?

$$\frac{7}{8} \div \frac{1}{2}$$

Talk with your partner, what do you know about this problem? (How many

$\frac{1}{2}$'s are in $\frac{7}{8}$?)

Is the answer going to be less than or greater than 1? How about 2?

- $4 \cdot 7$

Talk with your partner, what does this problem mean? What is it asking?

Estimate, $\frac{2}{5} \cdot \frac{3}{8}$

Talk with your partner, what do you know about this problem?

Is the answer going to be less than or greater than 1? Greater than or

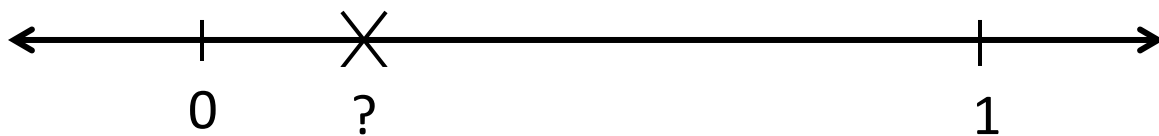
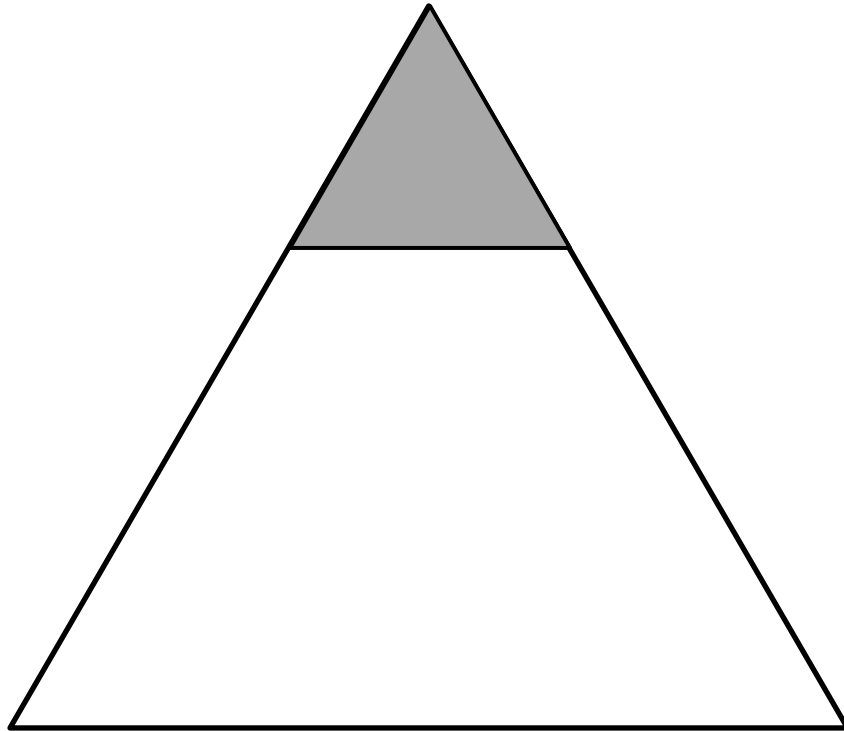
less than $\frac{1}{2}$? Greater than or less than $\frac{1}{4}$?

What if I changed it to $\frac{2}{5} \cdot \frac{7}{8}$, now what happens?

▪ **Word problems**

- Shelby and her brother are making an apple dessert. The recipe calls for $4\frac{1}{2}$ cups of flour. Shelby can only find the $\frac{1}{4}$ -cup measuring cup. Help Shelby and her brother figure out how many $\frac{1}{4}$ cups they need to reach $4\frac{1}{2}$ cups of flour.
- Two fractions add up to $\frac{1}{2}$. What might those two fractions be?
- A friend of mine put these fractions into two groups: $\frac{3}{4}$, $\frac{2}{5}$, $\frac{1}{3}$, $\frac{6}{10}$, $\frac{1}{10}$.
What might the two groups be?
- Some numbers add up to 10. I know that at least one of them has a fraction part in it, but none uses decimals. What might the numbers be?
- The answer is $\frac{3}{7}$. What might the question be?
- Mr. Davis is planning an art project for his class. Each student will need $\frac{3}{4}$ of a package of clay to do this project. If Mr. Davis has 12 students in his class, how many packages of clay would he need?

Estimate what fraction is shaded.



Estimate what fraction is shaded.

