

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 $\frac{1}{2}$

- **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?