

Student Guide

Folding Fractions (SG pp. 258–260)


Questions 1–11

- The denominator tells that the whole is divided into four equal pieces.
- The numerator tells that we are interested in three of the pieces.
- Richard showed four parts on his strip but they are not equal. He needs to show 4 equal parts to show fourths.
- The size of the parts gets smaller as the number of parts (denominator) gets bigger.
- $\frac{2}{4}, \frac{3}{6}, \frac{4}{8}$
- $\frac{6}{8}$
- $\frac{2}{6}$
- Peter, since $\frac{3}{4}$ is larger than $\frac{1}{2}$.
- Roberto, since $\frac{1}{2}$ is smaller than $\frac{5}{8}$.
- $\frac{1}{4}$
 - $\frac{1}{2}$
 - $\frac{4}{6}$
 - $\frac{7}{8}$
 - $\frac{2}{3}$
- $\frac{1}{8}, \frac{1}{4}, \frac{1}{2}$
 - $\frac{2}{4}, \frac{2}{3}, \frac{2}{2}$
 - $\frac{1}{8}, \frac{1}{6}, \frac{1}{3}$
 - $\frac{2}{6}, \frac{4}{8}, \frac{2}{3}$

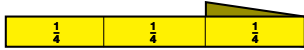
Folding Fractions

Lee Yah demonstrated folding fourths for her class.

"First, I folded my strip into two equal pieces. Next, I kept it folded and then I folded it in half again. When I unfold the strip, it is divided into 4 equal pieces. Since the 4 parts are all the same size, each piece is $\frac{1}{4}$ of the strip."




She showed three of the pieces to show $\frac{3}{4}$ of the strip.



In a fraction, the bottom number is the **denominator**. This number tells us how many equal pieces the whole is divided into. The top number, the **numerator**, tells us how many of the pieces we are interested in.

$\frac{3}{4}$
 ← numerator
 ← denominator

- In the fraction $\frac{3}{4}$, what information does the denominator give us? What information does the numerator give us in the fraction $\frac{3}{4}$?
- Richard folded his strip and marked the fourths. Does his strip show fourths? How do you know?



- Look at your fraction strips. What happens to the size of the fractional parts as the denominator gets bigger?

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Here is a chart made from fraction strips. The strips are in order from largest to smallest.

Fraction Chart


Whole							
$\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{3}$			$\frac{1}{3}$		$\frac{1}{3}$		
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$	

When two fractions show the same part of the whole, they are called **equivalent**. For example, $\frac{1}{2}$ and $\frac{2}{4}$ are equivalent to each other. Use the Fraction Chart to help answer these questions:

- Make a list of fractions that are equivalent to $\frac{1}{2}$.
- Find a fraction that is equivalent to $\frac{2}{3}$.
- Find a fraction that is equivalent to $\frac{1}{3}$.

Use the Fraction Chart to complete the following questions.

- Peter and his older brother each ordered a personal pizza for dinner. The pizzas were the same size. Peter ate $\frac{3}{4}$ of his pizza. His brother ate $\frac{1}{2}$ of his pizza. Who ate more pizza?
- Roberto walks $\frac{1}{4}$ of a mile to get to school. Keenya walks $\frac{5}{8}$ of a mile to get to school. Who lives closer to the school, Keenya or Roberto?




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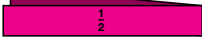
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- Use your Fraction Chart to compare the following pairs of fractions. For each pair, tell which fraction is larger.
 - $\frac{1}{4}, \frac{1}{6}$
 - $\frac{1}{2}, \frac{3}{8}$
 - $\frac{1}{2}, \frac{4}{6}$
 - $\frac{7}{8}, \frac{1}{2}$
 - $\frac{2}{3}, \frac{5}{8}$
- Use your Fraction Chart to put the following fractions in order from smallest to largest.
 - $\frac{1}{8}, \frac{1}{2}, \frac{1}{4}$
 - $\frac{2}{4}, \frac{2}{3}, \frac{2}{8}$
 - $\frac{1}{3}, \frac{1}{6}, \frac{1}{8}$
 - $\frac{2}{3}, \frac{2}{6}, \frac{4}{8}$

Use the *Fractions on Number Lines* pages in the *Student Activity Book* to connect fraction strips to number lines.



Using Fraction Strips

- Tanya showed the following fraction using her fraction strips. What fraction is she showing?
 
- Luis showed the following fraction using his fraction strips. What fraction is he showing?
 
- Ming showed the following fraction using his fraction strips. What fraction is he showing?
 

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10. Use your Fraction Chart to compare the following pairs of fractions. For each pair, tell which fraction is larger.

- A. $\frac{1}{4}, \frac{1}{8}$ B. $\frac{1}{2}, \frac{3}{8}$ C. $\frac{1}{2}, \frac{4}{6}$ D. $\frac{7}{8}, \frac{1}{2}$ E. $\frac{2}{3}, \frac{5}{8}$

11. Use your Fraction Chart to put the following fractions in order from smallest to largest.

- A. $\frac{1}{8}, \frac{1}{2}, \frac{1}{4}$ B. $\frac{2}{4}, \frac{2}{2}, \frac{2}{3}$ C. $\frac{1}{3}, \frac{1}{8}, \frac{1}{8}$ D. $\frac{2}{3}, \frac{2}{6}, \frac{4}{8}$

Use the *Fractions on Number Lines* pages in the *Student Activity Book* to connect fraction strips to number lines.



Using Fraction Strips

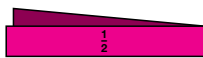
1. Tanya showed the following fraction using her fraction strips. What fraction is she showing?



2. Luis showed the following fraction using his fraction strips. What fraction is he showing?



3. Ming showed the following fraction using his fraction strips. What fraction is he showing?



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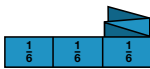
Homework (SG pp. 260–261)

Questions 1–8

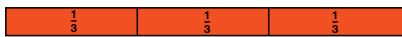
1. $\frac{6}{8}$
2. $\frac{2}{4}$
3. $\frac{1}{2}$
4. A. $\frac{3}{6}$
B. $\frac{3}{3}$
C. $\frac{4}{8}$
D. $\frac{1}{4}$
5. A. The denominator tells that the whole strip is divided into eight equal pieces.
B. The numerator tells that we are interested in three of the pieces.
6. A. $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}$
B. $\frac{6}{8}$
C. $\frac{2}{3}$
7. A. $\frac{3}{4}$
B. $\frac{2}{6}$
C. $\frac{2}{3}$
D. $\frac{2}{3}$
8. Sam, because he showed equal parts on his fraction strip.

4. Write a fraction for each fraction strip.

A.



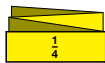
B.



C.



D.



5. Linda folded her eighths strip to show $\frac{3}{8}$.

- A. In the fraction $\frac{3}{8}$ what information does the denominator give us?
B. In the fraction $\frac{3}{8}$ what information does the numerator give us?

Check-In: Questions 6-8

6. Use the Fraction Chart to find:

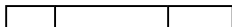
- A. three fractions equivalent to $\frac{4}{8}$.
B. a fraction equivalent to $\frac{3}{4}$.
C. a fraction equivalent to $\frac{4}{8}$.

7. Use your Fraction Chart to compare the following pairs of fractions. Tell which fraction is larger.

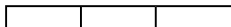
- A. $\frac{3}{4}, \frac{1}{8}$ B. $\frac{2}{6}, \frac{2}{6}$ C. $\frac{3}{8}, \frac{2}{3}$ D. $\frac{1}{2}, \frac{2}{3}$

8. Who showed fractions correctly? Explain how you know.

Kim's fraction strip



Sam's fraction strip



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