



Warm up Grade 6

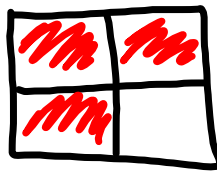
Date: \_\_\_\_\_

# Chapter 5

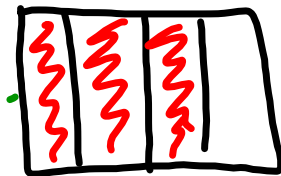
Lesson 1 Day 1

Draw each fraction in a square

3 ← Shade  
 4 ← cut your whole square into

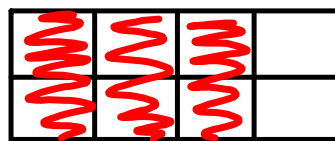


or



Shade 3 in the following rectangle

$$\frac{3}{4} \xrightarrow{\times 2} \frac{6}{8}$$



$$\frac{4}{8} \leftarrow \text{division}$$

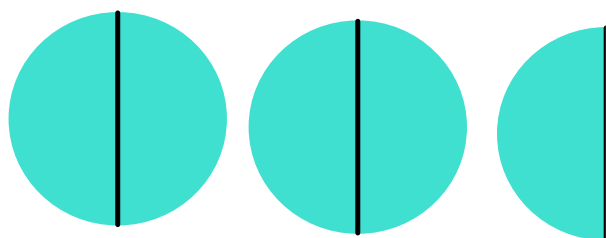
$$4 \div 8 = 0.5$$

$$\frac{1}{2}$$

$$1 \div 2 = 0.5$$

## Study

A mixed number is a combination of a whole number and a fraction.



There are  $2$  whole circles and  $\frac{1}{2}$  of another circle.

There are  $2\frac{1}{2}$  circles shown.

$2\frac{1}{2}$  is a mixed number.

# Improper Fractions

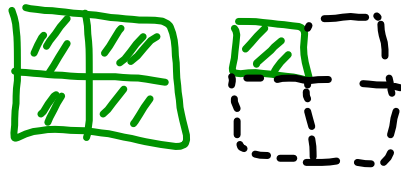
top

bottom

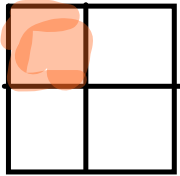


a fraction in which the numerator is greater than the denominator,

Example)  $\frac{5}{4}$  Numerator  
4 Denominator

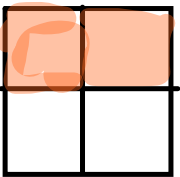


$$\frac{5}{4} = 1\frac{1}{4}$$



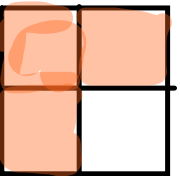
what fraction is colored?

$$\frac{1}{4}$$



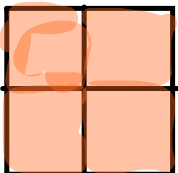
what fraction is colored?

$$\frac{2}{4} \xrightarrow{\div 2} \frac{1}{2} \text{ or } \frac{1}{2}$$



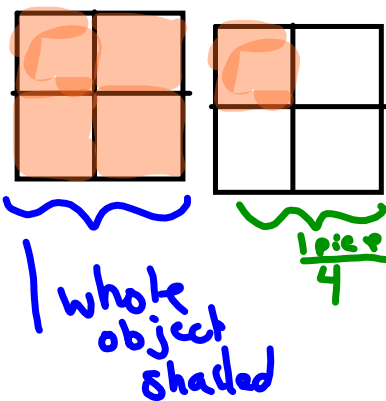
what fraction is colored?

$$\frac{3}{4}$$



what fraction is colored?

$$\frac{4}{4} = 1 \text{ whole}$$



what fraction is colored?

$$\frac{5}{4} = 1 \frac{1}{4} \text{ Mixed}$$

Improper

Both mixed and Improper

What is the value as a fraction?



$$\frac{4}{4} = 1$$

What is the value as a fraction?



$$\frac{1}{4}$$



What is the value as a fraction?

$$\frac{10}{4} \Rightarrow 2 \frac{2}{4}$$

Write each of mixed and improper

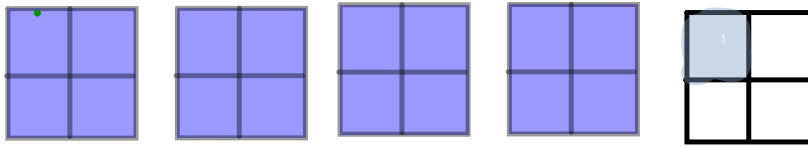
1a)



$$\frac{17}{6}$$

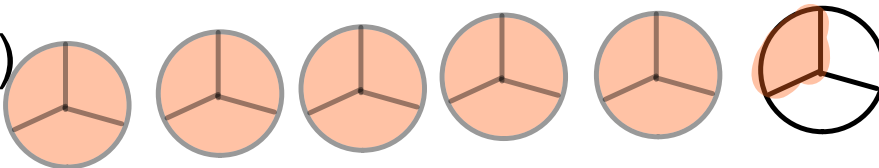
$$2 \frac{5}{6}$$

1b)

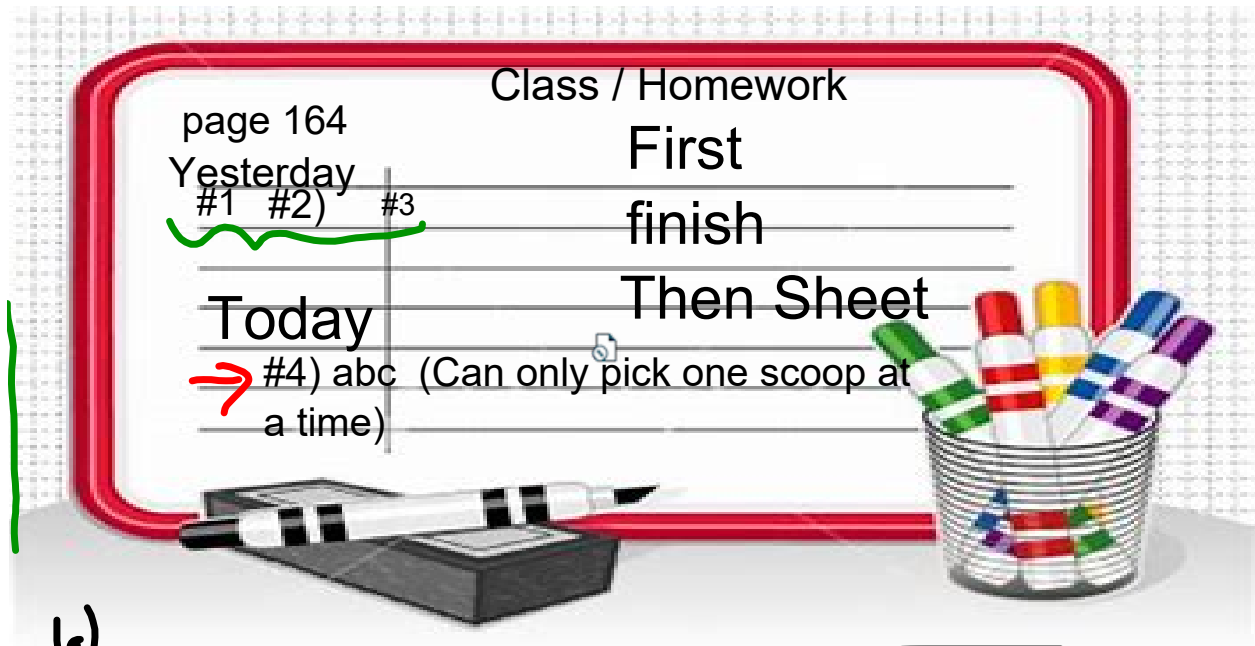


$$\frac{17}{4} = 4 \frac{1}{4}$$

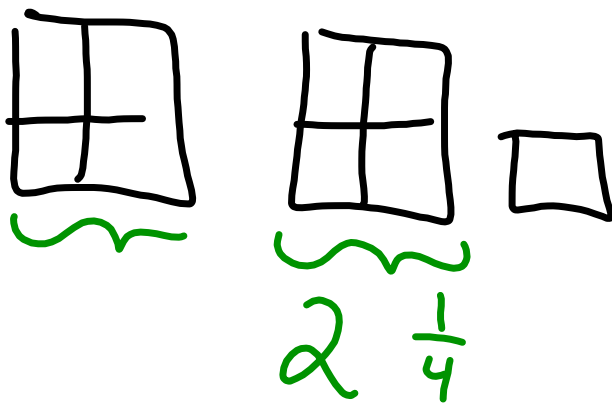
1c)



$$\frac{16}{3} = 5 \frac{1}{3}$$



1a)



bottom # is # of pieces that make 1 whole object



Model each of the following, then write as improper.

$$3 \frac{3}{10}$$

$$4 \frac{3}{5}$$

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

$$1 \frac{1}{7}$$

$$7$$

Model each of the following, then write as Mixed

$$\frac{17}{6}$$

$$\frac{31}{10}$$

$$\frac{26}{12}$$

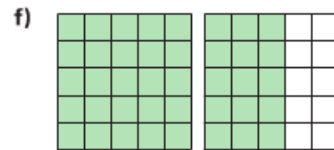
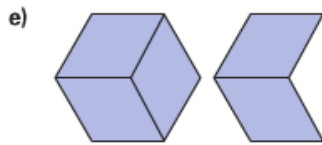
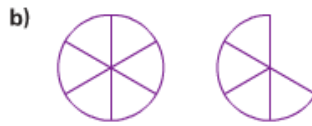
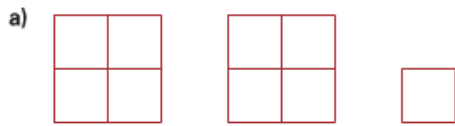
$$\frac{21}{7}$$

$$\frac{40}{9}$$

The image shows handwritten mathematical work. At the top, there are two 2x2 grids. The first grid is completely shaded with green diagonal lines, representing the fraction  $\frac{5}{4}$ . The second grid has one of its four squares shaded with green diagonal lines, representing the fraction  $\frac{1}{4}$ . Below these grids is the equation  $\frac{5}{4} = 1\frac{1}{4}$ . To the right of this equation is a large curly bracket. Below the bracket is the mixed number  $2\frac{1}{4}$ . Further to the right are two more 2x2 grids, both shaded with purple wavy lines, representing the fraction  $\frac{3}{4}$ . Below these grids is the mixed number  $3\frac{1}{4}$ . On the left side, there are several fractions:  $\frac{5}{4}$  (circled in blue),  $\frac{4}{4}$ ,  $\frac{1}{4}$  (circled in blue),  $1\frac{4}{4}$ , and  $2\frac{1}{4}$ . A blue line connects the circled  $\frac{5}{4}$  to the circled  $\frac{1}{4}$ .

**Practice**

1. Describe each picture as an improper fraction and as a mixed number.



2. a) Match each improper fraction with a mixed number.  
Draw pictures to record your work.

$$\frac{5}{4} \qquad \frac{9}{4} \qquad \frac{7}{4} \qquad 2\frac{3}{4} \qquad 1\frac{3}{4} \qquad 1\frac{1}{4} \qquad 2\frac{1}{4} \qquad 3\frac{1}{4}$$

- b) Draw a picture to show an improper fraction for each mixed number that did not match.

3. Use Pattern Blocks. Are the numbers in each pair equivalent?

Show your work.

- a)  $3\frac{2}{3}$  and  $\frac{11}{3}$       b)  $\frac{8}{6}$  and  $1\frac{1}{6}$       c)  $2\frac{1}{2}$  and  $\frac{5}{2}$

4. Which scoop would you use to measure each amount?  
How many of that scoop would you need?



- a)  $1\frac{1}{6}$  cups      b)  $2\frac{1}{2}$  cups      c)  $1\frac{2}{3}$  cups      d)  $1\frac{5}{6}$  cups

5. The Fernandez family drank  $3\frac{1}{2}$  pitchers of water on a picnic. Draw pictures to show the amount, then write this mixed number as an improper fraction. Show your work.



6. Kendra mowed her lawn for  $2\frac{1}{2}$  h.  
Mario mowed his lawn for  $\frac{1}{4}$  h, then stopped. He did this 7 times.  
Who spent more time mowing the lawn?  
How do you know?



7. Carlo baked pies for a party. He cut some pies into 6 pieces and some into 8 pieces. After the party, more than  $2\frac{1}{2}$  but less than 3 pies were left. How much pie might have been left? Show how you know.
8. Renée was making crepes by the dozen. Renée's family ate  $2\frac{1}{3}$  dozen crepes. How many crepes did they eat? Show your work.
9. How can you find out if  $2\frac{1}{2}$  and  $\frac{10}{4}$  name the same amount? Use words, numbers, and pictures to explain.