

# Constructing Fractions

Thursday 11/13/08

Name:  
Homeroom:  
Mr. Z.'s Science Class  
11/13/08

## Do-now: Fractions in measurement review

For the area units that we used last week, we discovered that...

$$1 \text{ white} = 4 \text{ blues}$$

$$1 \text{ blue} = 4 \text{ reds}$$

1. Fill in the following math sentences, using fractions:

$$1 \text{ blue} = \underline{\hspace{1cm}} \text{ white}$$

$$1 \text{ red} = \underline{\hspace{1cm}} \text{ blue}$$

$$1 \text{ red} = \underline{\hspace{1cm}} \text{ white}$$

2. Write out in words how you would say each of the following:

a)  $5/8$  red

b)  $1\frac{1}{4}$  white

c)  $2\frac{3}{7}$  blue

3. Convert the following into whites. Your answer will be a fraction or mixed number.

a) 3 blues =

b) 1 white + 5 reds =

c) 2 whites + 3 blues + 1 red

## Constructing fractions

4. Cut up one of your reds into halves, one into fourths, and one into eighths. Write " $1/2$ ", " $1/4$ ", and " $1/8$ " on the pieces as appropriate.

5. Do the same with the blues.

6. Lay out pieces to show each of the following:

a)  $3/4$  blue

b)  $5/8$  red

c)  $4/8$  blue

d)  $2/4$  blue

7. What is similar about the last two measurements you created? What is different?

8. Lay out pieces to show each of the following:

a)  $1\frac{3}{8}$  red

b)  $2\frac{1}{4}$  blue

c)  $3\frac{5}{8}$  red

d) 1 blue +  $1/2$  red +  $3/4$  blue +  $5/8$  red

9. The measurement in part b above is the same length as  $9/4$  blue. What would be different about how you would show the measurement  $9/4$  blue?

## Which is longer?

For each of the following problems, circle the measurement that is longer.

10.  $\frac{3}{8}$  red or  $\frac{1}{4}$  blue
11.  $\frac{5}{8}$  blue or  $\frac{3}{4}$  red
12.  $\frac{7}{8}$  blue or  $1\frac{3}{8}$  red
13.  $1\frac{1}{4}$  red or  $\frac{3}{4}$  blue
14.  $2\frac{3}{8}$  red or  $1\frac{5}{8}$  blue
15.  $\frac{7}{4}$  blue or  $\frac{5}{2}$  red
16.  $1\frac{3}{4}$  red +  $\frac{7}{8}$  blue or  $1\frac{1}{8}$  blue +  $\frac{5}{4}$  red

## Constructing Fractions Homework

1. Circle all of the boxes below that are exactly five eighths full.



2. Let's call the wide, narrow box in these pictures a "bar". Write in what measurement I am trying to show with each of the following:



3. In the previous problem...
- a) Compare and contrast the measurements shown in parts a and b.
  
  
  
  
  
  
  
  
  
  
  - b) Compare and contrast the measurements shown in parts c and d.

4. Using the bar as a unit, draw each of the following measurements:

