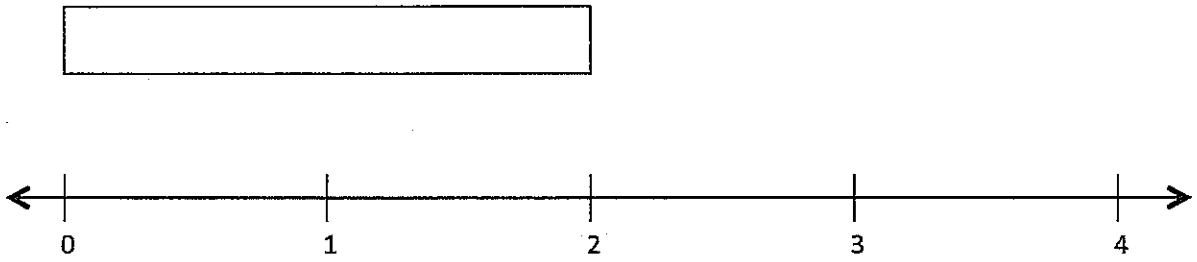
 REVIEW

Name _____

1. a. Partition the tape diagram to show $3 \times \frac{2}{3}$. Partition the number line to show $6 \times \frac{1}{3}$.



b. Use the models above to explain why $3 \times \frac{2}{3} = 6 \times \frac{1}{3}$.

2. Fill in the circles below with <, =, or > to make true number sentences. Use decomposition or multiplication to justify your answer.

a. $5 \bigcirc \frac{30}{6}$

b. $8\frac{1}{3} \bigcirc \frac{30}{3}$

c. $\frac{10}{5} \bigcirc \frac{27}{9}$

Common Core Standards:4.OA.5, 4.NF.1, 4.NF.2, 4.NF.3, 4,NF.4, 4.MD.4

3. Generate a pattern of at least 8 fractions by adding $\frac{1}{2}$ to $\frac{1}{2}$ and then continuing to add $\frac{1}{2}$ to each fraction. Circle each fraction equal to a whole number. Write what you notice about the pattern of whole numbers. The first two fractions are written for you.

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

4. Find each sum or difference.

a. $3\frac{2}{10} + 4\frac{4}{10} =$

b. $2\frac{1}{8} + 1\frac{2}{8} + 2\frac{7}{8} =$

c. $3\frac{7}{11} - 1\frac{5}{11}$

d. $3\frac{1}{5} - 2\frac{3}{5}$

Hint! A unit faction has a one as the numerator.

5. a. Rewrite $2 \times \frac{4}{6}$ as the product of a unit fraction and a whole number. Solve.

b. Rewrite $2 \times 2\frac{2}{4}$ as the product of a unit fraction and a whole number. Solve.

6. Determine if the following are true or false. Explain how you know using models or words.

a. $3\frac{1}{3} = 3 + \frac{1}{3}$

b. $\frac{4}{3} = \frac{1}{3} + \frac{3}{3}$

c. $\frac{8}{6} - \frac{5}{6} = \frac{8-5}{6}$

d. $\frac{8}{3} = 8 + \frac{1}{3}$

e. $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = 4 + \frac{1}{8}$

f. $3 \times 1\frac{1}{4} = 4 + \frac{1}{4}$

Common Core Standards:4.OA.5, 4.NF.1, 4.NF.2, 4.NF.3, 4,NF.4, 4.MD.4

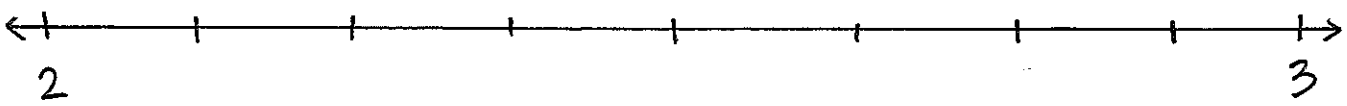
7. The chart to the right shows data Sammy collected about insect lengths.

   a. At the bottom of this page, create a line plot to display the data in the table.

   b. What is the difference in length between the widest and narrowest insect on the chart?

Insect	Length (inches)
Beetle	$2\frac{7}{8}$
Earwig	$2\frac{4}{8}$
Moth	$2\frac{2}{8}$
Termite	$2\frac{1}{8}$
Water Bug	$2\frac{5}{8}$
Wasp	$2\frac{1}{4}$

   c. Two insects have the same length. Explain how you know the measurements are equal.



8. Solve each problem. Draw a model, write an equation, and write a statement for each.

   d. Sammy wants to display a Water Bug and Termite side-by-side in a photo box with a width of 4 inches. Will these two insects fit? Explain how you know.

   e. Compare the wingspan of the Termite and the Wasp using >, <, or =.

   f. The Goliath Beetle can have a length that is 4 times as long as theTermite. How many inches can the Goliath Beetle's length be?

   g. Sammy discovered a pattern. He started with $4\frac{1}{4}$ inches and added $\frac{1}{4}$ inch to each measurement. List the next three measurements in his pattern.