Name _____   Date _____

1. The total length of each tape diagram represents 1. Decompose the shaded unit fractions as the sum of smaller unit fractions in at least two different ways. The first one has been done for you.

a.

$\frac{1}{2}$

$\frac{1}{2} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$
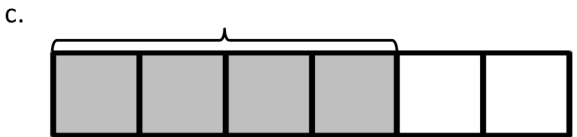
$\frac{1}{2}$

$\frac{1}{2} = \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$

b.

$\frac{1}{4}$

$\frac{1}{4}$
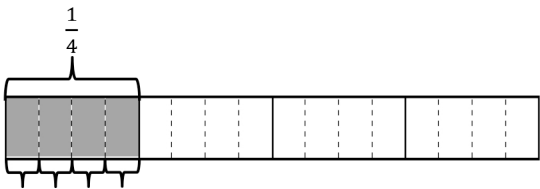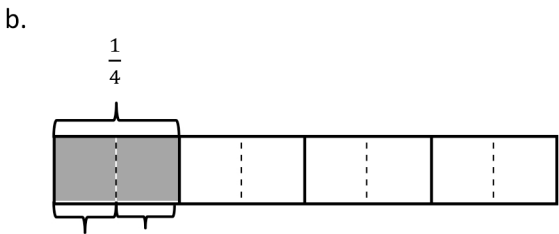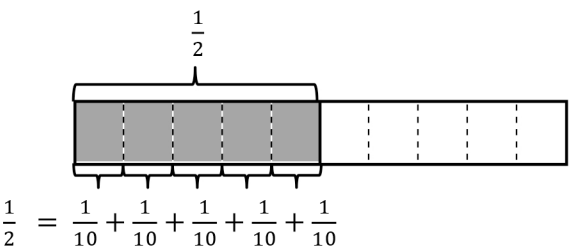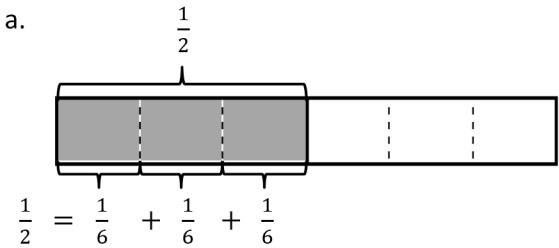
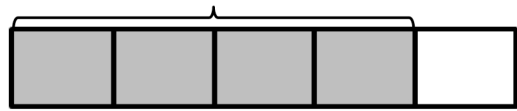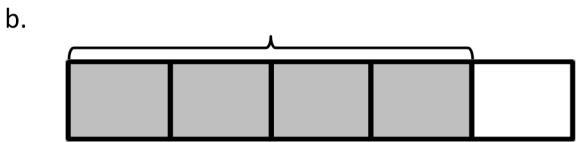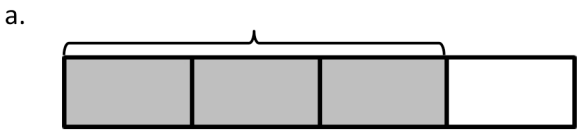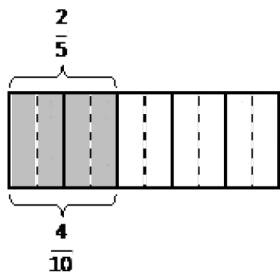2. The total length of each tape diagram represents 1. Decompose the shaded fractions as the sum of smaller unit fractions in at least two different ways.

a.

b.

c.

3. Draw tape diagrams to prove the following statements. The first one has been done for you.

a. $\frac{2}{5} = \frac{4}{10}$

b. $\frac{3}{6} = \frac{6}{12}$

c. $\frac{2}{6} = \frac{6}{18}$

d. $\frac{3}{4} = \frac{12}{16}$

4. Show that $\frac{1}{2}$ is equivalent to $\frac{6}{12}$ using a tape diagram and a number sentence.

5. Show that $\frac{2}{3}$ is equivalent to $\frac{8}{12}$ using a tape diagram and a number sentence.

6. Show that $\frac{4}{5}$ is equivalent to $\frac{12}{15}$ using a tape diagram and a number sentence.

Answer Key

1. a. Answer provided.

   b. $\frac{1}{4} = \frac{1}{8} + \frac{1}{8}$; $\frac{1}{4} = \frac{1}{16} + \frac{1}{16} + \frac{1}{16} + \frac{1}{16}$

2. a. Answers will vary.

   b. Answers will vary.

   c. Answers will vary.

3. a. Answer provided.

   b. Tape diagram models number sentence.

   c. Tape diagram models number sentence.

   d. Tape diagram models number sentence.

4. Tape diagram models number sentence.

5. Tape diagram models number sentence.

6. Tape diagram models number sentence.