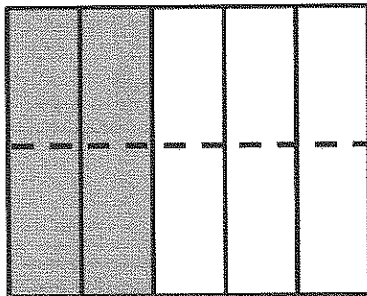## G4-M5-Lesson 8

Each rectangle represents 1.

1. The shaded fraction has been decomposed into smaller units. Express the equivalent fraction in a number sentence using multiplication.

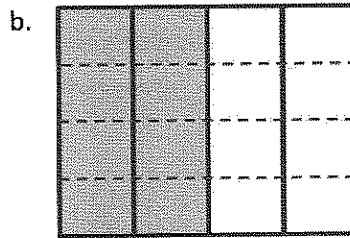$$\frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$$

> The number of units in the area model has been doubled. There were 5 units, and now there are 10 units.

2. Decompose both shaded fractions into sixteenths. Express the equivalent fractions in a number sentence using multiplication.

a.
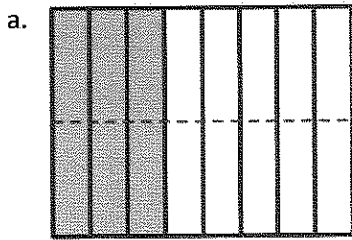
$$\frac{3}{8} = \frac{3 \times 2}{8 \times 2} = \frac{6}{16}$$

> I draw 1 line to partition each unit into 2.

b.

$$\frac{2}{4} = \frac{2 \times 4}{4 \times 4} = \frac{8}{16}$$

> I draw 3 lines to partition each unit into 4.

3. Use multiplication to create an equivalent fraction for the fraction $\frac{8}{6}$.

$$\frac{8}{6} = \frac{8 \times 2}{6 \times 2} = \frac{16}{12}$$

> To make an equivalent fraction, I can choose any fraction equivalent to 1. I can choose $\frac{3}{3}, \frac{4}{4}, \frac{5}{5}$, etc.

4. Determine if the following is a true number sentence. Correct it if it is false by changing the right-hand side of the number sentence.

$$\frac{5}{4} = \frac{15}{16}$$

> This is false! The numerator was multiplied by 3. The denominator was multiplied by 4. Three fourths is not a fraction equal to 1.

Sample Student Response:

Not true!

$$\frac{5}{4} = \frac{5 \times 3}{4 \times 3} = \frac{15}{12}$$

Lesson 8: Use the area model and multiplication to show the equivalence of two fractions.

EUREKA MATH