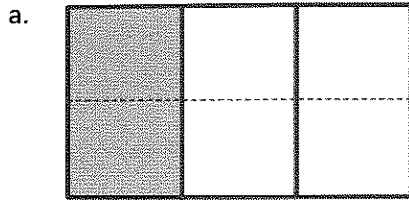


G4-M5-Lesson 7

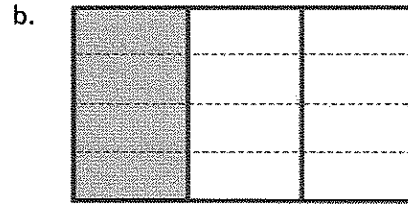
Each rectangle represents 1.

1. The shaded unit fractions have been decomposed into smaller units. Express the equivalent fractions in a number sentence using multiplication.



$$\frac{1}{3} = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

The numerator is 1.
The denominator is 3.

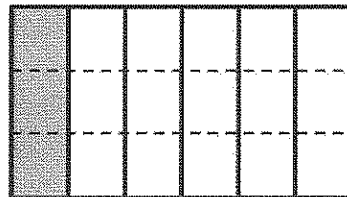


$$\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}$$

I can multiply the numerator (number of fractional units selected) and the denominator (the fractional unit) by 4 to make an equivalent fraction.

2. Decompose the shaded fraction into smaller units using the area model. Express the equivalent fractions in a number sentence using multiplication.

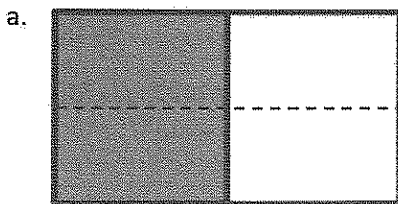
The area model shows that $\frac{1}{6}$ equals $\frac{3}{18}$.



As I multiply, the size of the units gets smaller.

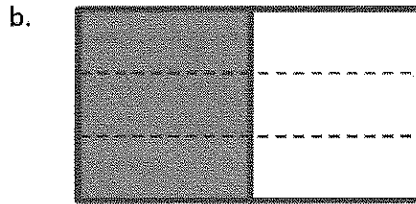
$$\frac{1}{6} = \frac{1 \times 3}{6 \times 3} = \frac{3}{18}$$

3. Draw three different area models to represent 1 half by shading. Decompose the shaded fraction into (a) fourths, (b) sixths, and (c) eighths. Use multiplication to show how each fraction is equivalent to 1 half.



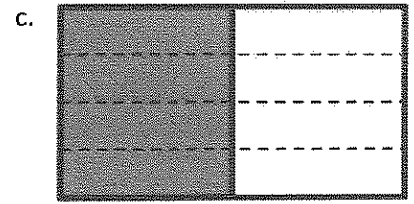
$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

The number of units doubled.



$$\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$$

The number of units tripled.



$$\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

The number of units quadrupled.