

Illustrating Mixed Number Products as Area Models

Name: _____

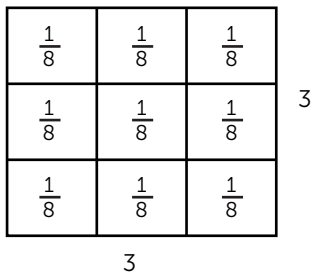
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When multiplying a whole number by a fraction, it can be helpful to show the result using an area model. This can be done in a few easy steps!

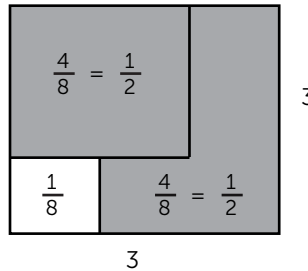
Consider $9 \times \frac{1}{8}$

Step 1: Split the whole number into two factors: $9 \frac{1}{8} = (3 \times 3) \times \frac{1}{8}$
(This will insure you have a rectangular illustration.)

Step 2: Draw the area model grid for length times height and include the fraction in each grid section.



Step 3: Group fraction grid sections in easy chunks (like 1, 1/2 or 1/3) and add them:



$$\frac{1}{2} + \frac{1}{2} + \frac{1}{8} = 1 \frac{1}{8}$$

Step One Exercises

Directions: Rewrite each expression to show each whole number as two factors and illustrate your area model grid with fraction parts.

1. $8 \times \frac{1}{6} =$

2. $9 \times \frac{1}{2} =$

3. $7 \times \frac{1}{3} =$

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Step Two Exercises

Directions: For each model above, group and shade your fraction parts in easy chunks (like 1, 1/2 or 1/3) and add them.

1. $8 \times \frac{1}{6} =$

2. $9 \times \frac{1}{2} =$

3. $7 \times \frac{1}{3} =$

Say More About That!

Describe two things an area model reveals about a mixed number product.
