Unit 3, Lesson 8

Work with Mixed Numbers

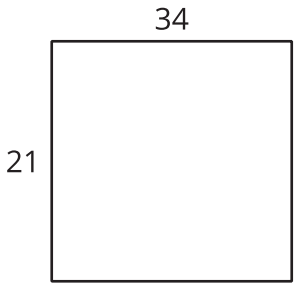
Let's use what we've learned to multiply mixed numbers.

Warm-up

Notice and Wonder: Comparing Diagrams

What do you notice? What do you wonder?

A



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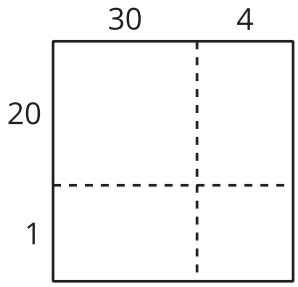

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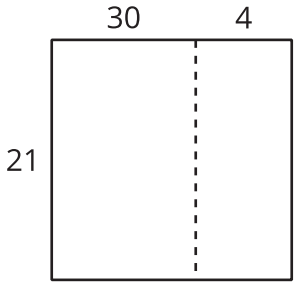

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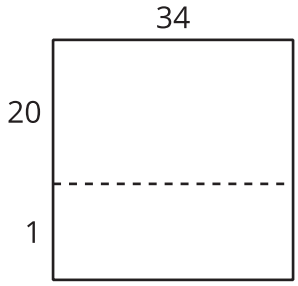

Activity 1

Different Ways to Find a Product

1. Find the value of $2\frac{1}{4} \times 3\frac{1}{2}$. Show or explain your reasoning.

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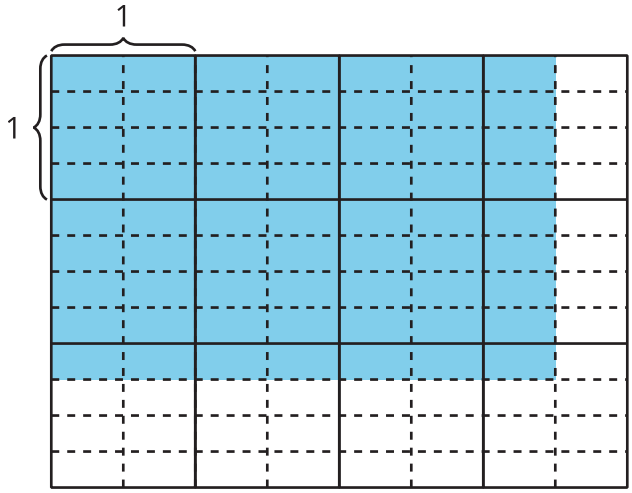
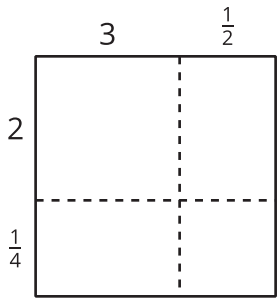
2. Lin and Han draw diagrams to find the value of $2\frac{1}{4} \times 3\frac{1}{2}$.





a. How are Lin's and Han's diagrams alike? How are they different?

b. Discuss how to use each diagram to find the value of $2\frac{1}{4} \times 3\frac{1}{2}$.

3. Here is Jada's way to multiply $2\frac{1}{4} \times 3\frac{1}{2}$.

I know that 2 is $\frac{8}{4}$, so $2\frac{1}{4}$ is $\frac{9}{4}$.

I also know that 3 is $\frac{6}{2}$, so $3\frac{1}{2}$ is $\frac{7}{2}$.

$$\frac{9}{4} \times \frac{7}{2} = \frac{63}{8}$$

Compare the different ways to find the value of $2\frac{1}{4} \times 3\frac{1}{2}$.

How are they alike? How are they different?

Activity 2

Products Everywhere

Choose any 3 expressions. Find the value of each product. Explain or show your reasoning.

1. $3\frac{1}{4} \times 2\frac{2}{3}$

2. $5\frac{3}{10} \times 1\frac{7}{10}$

3. $2\frac{1}{2} \times 4\frac{1}{2}$

4. $2\frac{2}{5} \times 5\frac{1}{2}$