

Lesson 15: Multiply More Fractions

- Let's multiply mixed numbers.

Warm-up: Number Talk: Multiply Mixed Numbers

Find the value of each expression mentally.

- $6 \times \frac{3}{8}$

- $6 \times 2\frac{3}{8}$

- $7 \times \frac{9}{10}$

- $7 \times 3\frac{9}{10}$

15.1: Multiply Your Way

Write numbers from the list in the blank spaces so the situations make sense. Each number will be used only one time. Be prepared to explain your thinking.

4 5 $5\frac{1}{2}$ 3 $5\frac{3}{4}$ 2

1. The area of the rug is $16\frac{1}{2}$ square feet. The length of the rug is _____ feet.

The width of the rug is _____ feet.

2. The puzzle is $2\frac{1}{2}$ feet wide. It is _____ feet long. It has an area of _____ square feet.

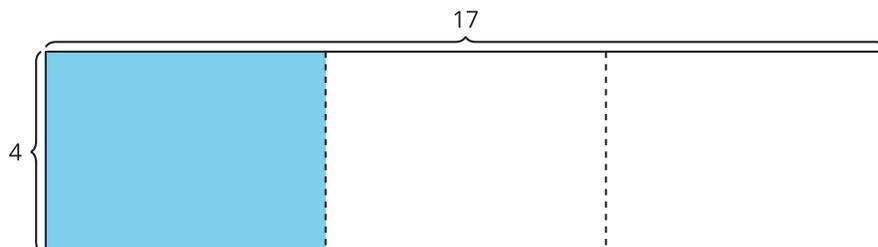
3. The area of the whiteboard is 23 square feet. The length of the whiteboard is _____ feet. The width of the whiteboard is _____ feet.

Share your solutions with your partner. Explain what choices you made and why.

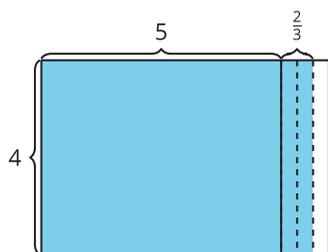
15.2: Equivalent Expressions

Each diagram represents a way to calculate $4 \times 5\frac{2}{3}$. Each expression is equivalent to $4 \times 5\frac{2}{3}$. Match the diagrams and expressions. Show or explain your reasoning.

A

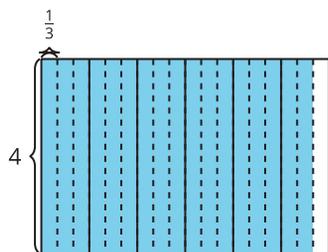


B



1. $(4 \times 5) + (4 \times \frac{2}{3})$

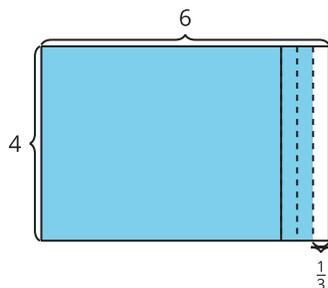
C



2. $(4 \times 6) - (4 \times \frac{1}{3})$

3. $4 \times \frac{17}{3}$

D



4. $(4 \times 17) \div 3$

Choose your favorite diagram and expression to find the value of $4 \times 5\frac{2}{3}$. Explain why it is your favorite.