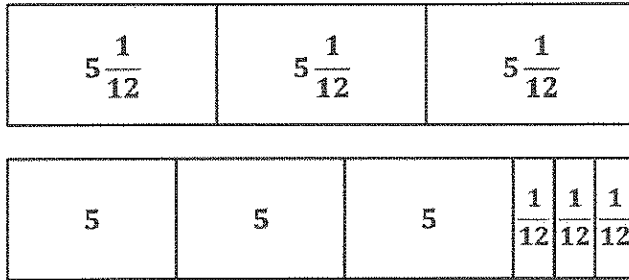


G4-M5-Lesson 37

1. Draw tape diagrams to show two ways to represent 3 units of $5\frac{1}{12}$.



I rearrange the model for 3 copies of $5\frac{1}{12}$ by decomposing $5\frac{1}{12}$ into two parts: 5 and $\frac{1}{12}$. I show 3 groups of 5 and 3 groups of $\frac{1}{12}$.

Write a multiplication expression to match each tape diagram.

$$3 \times 5\frac{1}{12}$$

$$(3 \times 5) + \left(3 \times \frac{1}{12}\right)$$

$5\frac{1}{12}$ is composed of two units: ones and twelfths. I use the distributive property to multiply the value of each unit by 3. $3 \times 5\frac{1}{12}$ is equal to 3 fives and 3 twelfths.

2. Solve using the distributive property.

a. $2 \times 3\frac{5}{6} = 2 \times \left(3 + \frac{5}{6}\right)$

$$= (2 \times 3) + \left(2 \times \frac{5}{6}\right)$$

$$= 6 + \frac{10}{6}$$

$$= 6 + 1\frac{4}{6}$$

$$= 7\frac{4}{6}$$

b. $4 \times 2\frac{3}{4} = 4 \times \left(2 + \frac{3}{4}\right)$

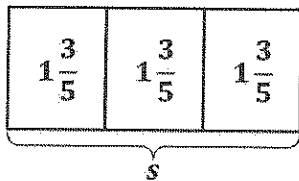
$$= 8 + \frac{12}{4}$$

$$= 8 + 3$$

$$= 11$$

I omit writing this step for Part (b) because I can see it's 4 copies of 2 and 4 copies of $\frac{3}{4}$, or $8 + \frac{12}{4}$.

3. Sara's street is $1\frac{3}{5}$ miles long. She ran the length of the street 3 times. How far did she run?



$$\begin{aligned}
 s &= 3 \times 1\frac{3}{5} \\
 &= (3 \times 1) + \left(3 \times \frac{3}{5}\right) \\
 &= 3 + \frac{9}{5} \\
 &= 3 + 1\frac{4}{5} \\
 s &= 4\frac{4}{5}
 \end{aligned}$$

I use the distributive property to multiply the ones by 3 and the fractional part by 3.

Sara ran $4\frac{4}{5}$ miles.