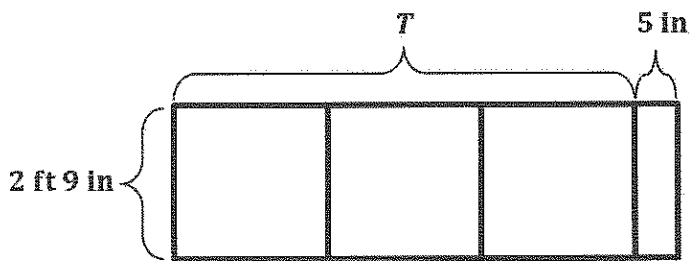


### G4-M7-Lesson 11

1. A rectangular sidewalk is 2 feet 9 inches wide. Its length is three times the width plus 5 more inches. How long is the sidewalk?



To find the length, I triple the width and add 5 inches.

$$\begin{aligned}
 T &= 3 \times (2 \text{ ft } 9 \text{ in}) + 5 \text{ in} \\
 &= (3 \times 2 \text{ ft}) + (3 \times 9 \text{ in}) + 5 \text{ in} \\
 &= 6 \text{ ft} + 27 \text{ in} + 5 \text{ in} \\
 &= 6 \text{ ft} + 32 \text{ in} \\
 &\quad \begin{array}{l} \swarrow \quad \searrow \\ 2 \text{ ft} \quad 8 \text{ in} \end{array} \\
 &= 8 \text{ ft } 8 \text{ in}
 \end{aligned}$$

The distributive property helps me to solve.

The sidewalk is 8 feet 8 inches long.

2. Mr. Lalonde plans to make his world-famous cookies. He has 2 pounds 3 ounces of brown sugar. This is  $\frac{1}{3}$  of the total amount of brown sugar needed. If he uses 7 ounces of brown sugar for each batch of cookies, how many batches of cookies can he make?



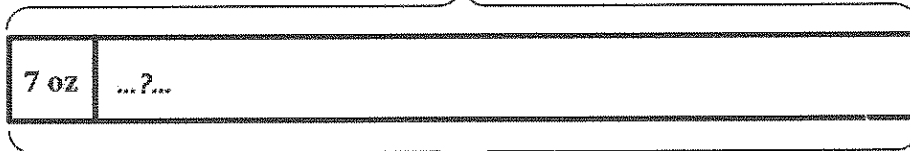
$$\begin{array}{r}
 2 \text{ lb } 3 \text{ oz} = 35 \text{ oz} \\
 \swarrow \quad \searrow \\
 16 \text{ oz} \quad 16 \text{ oz}
 \end{array}$$

I triple the amount of brown sugar that Mr. Lalonde already has.

$$\begin{array}{r}
 35 \\
 \times 3 \\
 \hline
 105
 \end{array}$$

$$\begin{array}{c}
 B \\
 105 \text{ oz}
 \end{array}$$

$$B = 3 \times 35 \text{ oz} = 105 \text{ oz}$$



$$\begin{array}{r}
 105 \\
 7 \overline{) 105} \\
 \underline{- 7} \phantom{0} \\
 35 \\
 \underline{- 35} \\
 0
 \end{array}$$

I divide by 7 to find the number of batches he can make.

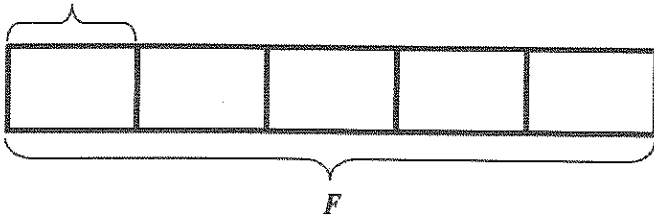
$$\begin{array}{c}
 C \\
 \text{number of } 7 \text{ oz groups}
 \end{array}$$

$$C = 15$$

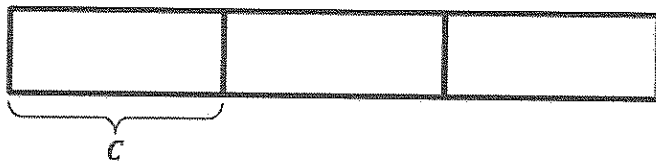
Mr. Lalonde can make 15 batches of cookies.

3. Rocket exercised for 2 hours 27 minutes each day for 5 days. He spent an equal amount of time on lower body, upper body, and cardio. How long did he spend on cardio during the five-day period?

2 hr 27 min



$$\begin{aligned}
 F &= 5 \times 2 \text{ hr } 27 \text{ min} \\
 &= (5 \times 2 \text{ hr}) + (5 \times 27 \text{ min}) \\
 &= 10 \text{ hr } 135 \text{ min} \\
 &\quad \begin{array}{l} \swarrow \quad \searrow \\ 2 \text{ hr} \quad 15 \text{ min} \end{array} \\
 &= 12 \text{ hr } 15 \text{ min}
 \end{aligned}$$



$$\begin{aligned}
 C &= (12 \text{ hr } 15 \text{ min}) \div 3 \\
 &= (12 \text{ hr} \div 3) + (15 \text{ min} \div 3) \\
 &= 4 \text{ hr} + 5 \text{ min} \\
 &= 4 \text{ hr } 5 \text{ min}
 \end{aligned}$$

I find the total time that Rocket spends exercising, and then I divide each unit of time by 3.

*Rocket spent 4 hours 5 minutes on cardio during the five-day period.*