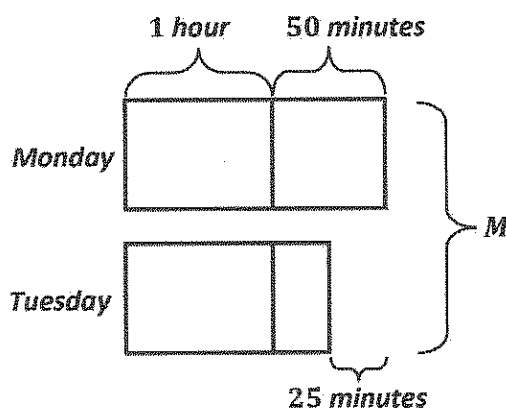## G4-M7-Lesson 14

Use RDW to solve the following problems.

1. Doug practiced piano for 1 hour and 50 minutes on Monday. On Tuesday, he practiced piano for 25 minutes less than Monday. How many minutes did Doug practice piano on Monday and Tuesday?

I can draw a tape diagram to represent the amount of time that Doug practiced piano each day. The tape for Monday is longer than Tuesday's because he practiced for 25 minutes less on Tuesday.

1 hour 50 minutes − 25 minutes = 1 hour 25 minutes

I subtract 25 minutes from Monday's time to figure out how long Doug practiced on Tuesday.

1 hour 50 minutes + 1 hour 25 minutes = 2 hours 75 minutes

2 hours 75 minutes = 120 minutes + 75 minutes = 195 minutes

M = 195 minutes

I add the times for Monday and Tuesday to find the total time. Then I convert the hours to minutes.
1 hour = 60 minutes, so 2 hours = 120 minutes.

Doug practiced piano for 195 minutes on Monday and Tuesday.

Lesson 14:   Solve multi-step word problems involving converting mixed number measurements to a single unit.

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2. Ella can make 15 bracelets from a 105-inch piece of cord.

   a. How many inches of cord would be needed to make 60 bracelets?

   15 bracelets
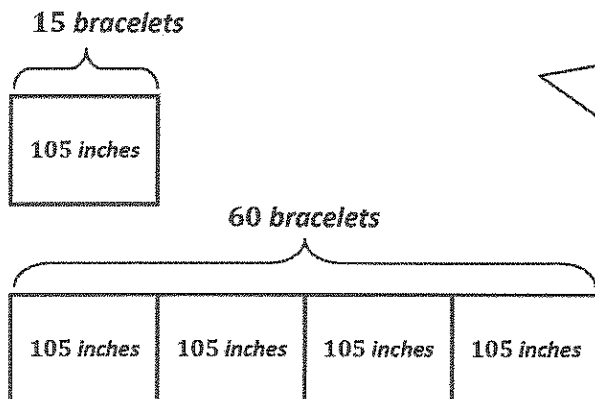
105 inches

   > I can draw 1 unit of 105 inches to represent the length of cord needed to make 15 bracelets. I can draw 4 units of 105 inches to represent the length of cord needed to make 60 bracelets because $4 \times 15 = 60$.

   60 bracelets

105 inches	105 inches	105 inches	105 inches

   4×105 inches $= 420$ inches

   $$
   \begin{array}{ccc}
   & 1 & 0 & 5 \\
   \times & & & 4 \\
   \hline
   & 4 & 2 & 0
   \end{array}
   $$

   > To find the total number of inches of cord that Ella needs to make 60 bracelets, I can multiply 4×105 inches.

   Ella needs 420 inches of cord to make 60 bracelets.

   b. Extension: The cord Ella uses to make bracelets is also sold in $8\frac{1}{3}$-foot packages. How many packages would be needed to make 60 bracelets?

   $8\frac{1}{3}$ *feet* $= 100$ *inches*

   96   4
   inches   inches
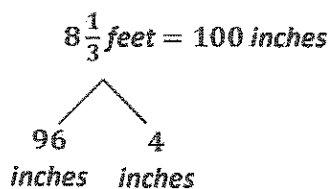
   > I can covert $8\frac{1}{3}$ feet to inches. 8×12 inches $= 96$ inches and $\frac{1}{3}$ foot $= 4$ inches. 96 inches $+ 4$ inches $= 100$ inches. Ella would need to buy 5 packages because 4 packages would only be 400 inches of cord and she needs 420 inches of cord.

   5×100 *inches* $= 500$ *inches*

   Ella would need 5 packages to make 60 bracelets.

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Lesson 14:   Solve multi-step word problems involving converting mixed number measurements to a single unit.

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