



SKILL 8: PROBLEM SOLVING: Draw a Diagram

Solving a problem can often be easier if you draw a diagram or picture to help you understand the problem.

Example

Marti has Sunday off, then works Monday through Saturday, so she has a day off once every 7 days. She needs to give her dog some medicine every 3 days. How often does she give her dog medicine on her day off?

Read Marti's days off occur every 7 days. Her dog needs medicine every 3 days.

Plan Draw a diagram of several weeks on a calendar. Label her days off with "Off." Label the days her dog needs medicine with "M."

Solve Start with a Sunday she is off and she gives medicine. Find the next day that this happens.

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Off/M			M			M
Off		M			M	
Off	M			M		
Off/M						

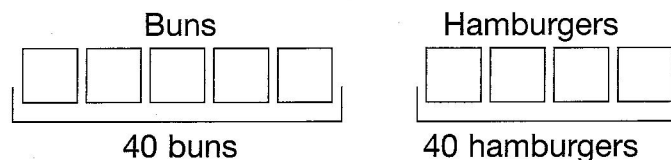
Twenty-one days later, Marti has a day off and her dog needs medicine. She gives her dog medicine on her day off every 21 days.

Look Back Does your answer makes sense? The least common multiple of 7 and 3 is 21. It makes sense that an event occurring every 7 days and another event occurring every 3 days will occur together on the LCM of 7 and 3.

Guided Practice

Ari is buying buns and hamburgers for a picnic. Buns come 8 to a package. Hamburgers come 10 to a package. Ari would like to buy exactly as many hamburgers as buns.

- Fill in the diagram with the number of items per package to illustrate the fewest number of packages of each item Ari should buy.



- How many buns and hamburgers will he buy? _____
- How many packages of each will this be?
 _____ packages of buns; _____ packages of hamburgers