NAME _____ DATE _____

Real-Life Application:
When Will I Ever Use This?

For use with pages 411–417

The Juan Fernandez Islands

Juan Fernandez is the name of a group of three islands that lie off the West Coast of Chile in the Pacific Ocean. Juan Fernandez, a Spanish explorer, discovered the islands in 1574. These islands, Robinson Crusoe, Santa Clara, and Alejandro Selkirk, are part of Chile. The island group has an area of 56 square miles. Most of the people fish for a living. The islands' waters are well known for the lobsters caught there.

Only Robinson Crusoe, the second largest island of the group, has a permanent population. About 500 Spanish-speaking people live there. It is famous because this is the island where Alexander Selkirk stayed alone for more than four years (1704-1709). The English writer Daniel Defoe partly based his Robinson Crusoe on Selkirk's adventures.

In Exercises 1-4, use the following information.

A ship carrying people to the island of Robinson Crusoe leaves the port city of La Serena, Chile. The ship travels on a straight line represented by the equation $10y - 7x = 127$. Another ship leaves the port city of Valdivia with supplies for the island dwellers. The equation $1.1x + y = -7.1$ represents the path taken by the ship leaving from Valdivia. Ships navigate with the use of a coordinate system because there is nothing to look at in the middle of an ocean. Will the ships end up at the same coordinates, the island of Robinson Crusoe?

1. Write the equations in standard form.

2. Solve the linear system using linear combinations.

3. Interpret your answer? (What do the values of x and y tell you?)

4. Graph the linear system to check your answer to Exercise 2.

Algebra 1
Chapter 7 Resource Book