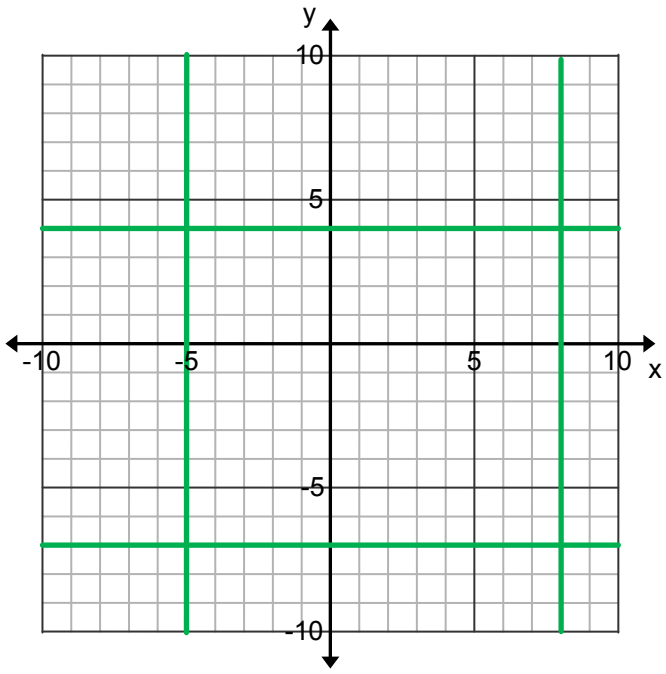
Assignment: Equations of Vertical and Horizontal Lines

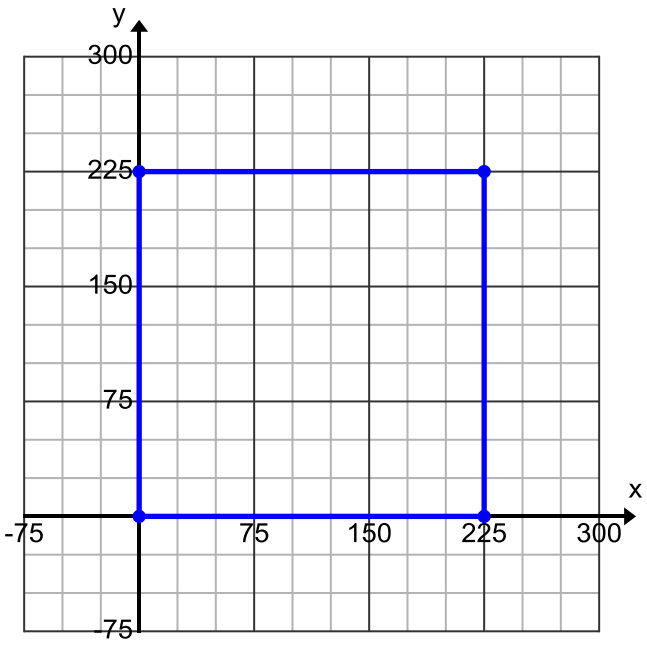
Write equations for the horizontal and vertical lines described in the real-world situations below.

1. In many cities and towns across the United States, the numbering system of the roads is based on a grid, similar to the latitude and longitude lines on a globe. Suppose the green lines in the following graph represent two east-west and two north-south running roads in a Midwestern town.



   Write equations for the two horizontal and two vertical lines that represent roads in the town.

2. The Willis Tower (formerly known as the Sears Tower) in Chicago, Illinois, is the tallest building in the United States. Measuring 1,450 feet, the tower contains 110 stories filled with a combination of office and retail space. The base of the tower is made up of nine 75’ × 75’ squares. Suppose the square graphed on the coordinate plane below represents the base of the Willis Tower.



Write equations for the two horizontal and two vertical lines that pass through the square.

3. Think of another real-world situation that might involve horizontal and vertical lines. Write a description of the situation and draw the graph of a coordinate plane with two horizontal and two vertical lines to represent your situation. Draw the lines so that two of them pass through positive values and the other two pass through negative values on the coordinate plane. Then write equations for all four of the lines on your graph.