Problem 11.3.1: Whizbang Widgets Inc. produces two models of widgets, the wacky widget and the wonky widget. Producing a wacky widget requires 3 pounds of plastic and 6 minutes of labor. Producing a wonky widget requires 4 pounds of plastic and 3 minutes of labor. The profit for each wacky widget is $2 and the profit for each wonky widget is $1.50. If 1000 pounds of plastic and 20 hours of labor are available each day, how many widgets of each model should Whizbang Widgets Inc. produce in order to maximize profits?

Problem 11.3.2: Whizbang Widgets Inc. decides to introduce a new model of widget, the wicked widget. Producing a wicked widget requires 5 pounds of plastic and 2 minutes of labor. The profit for each wicked widget is $1.75. How many widgets of each of the three models should Whizbang Widgets Inc. produce now?