**College Algebra 1**

**6.6 Systems of Linear Inequalities**

**Objective: To solve systems of linear inequalities by graphing**

**To model real-world situations using systems of linear inequalities**

Starter: Graph the following inequalities

2. 3.

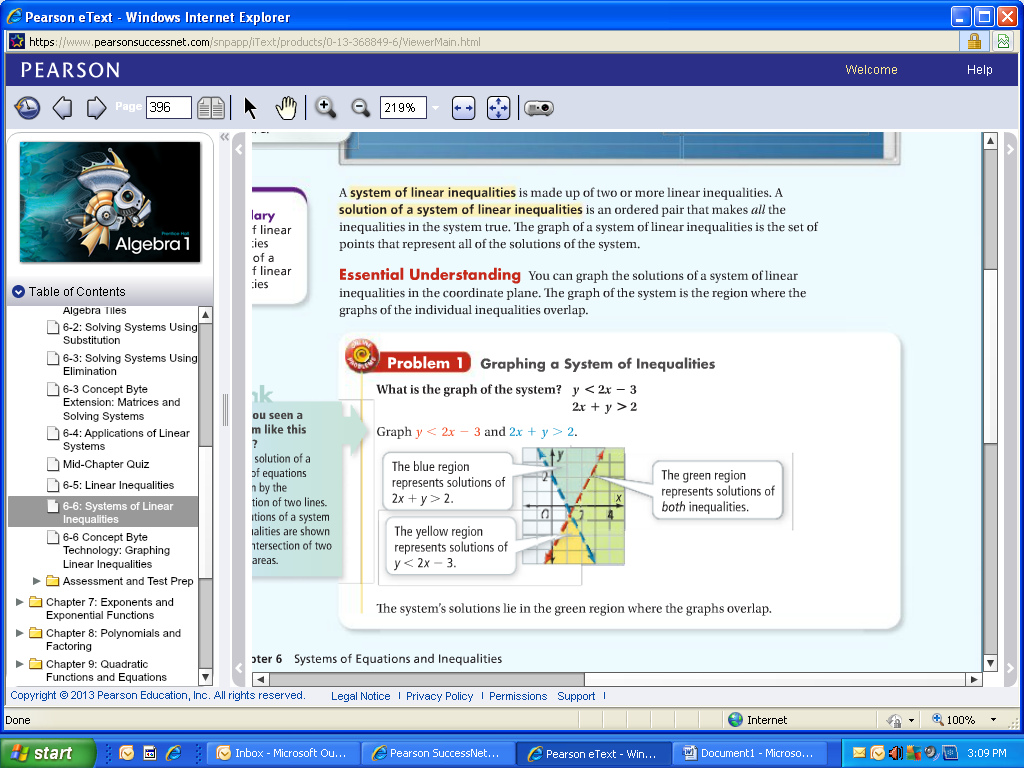
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**System of Linear Inequalities:**

**Solution of a system of inequalities:**

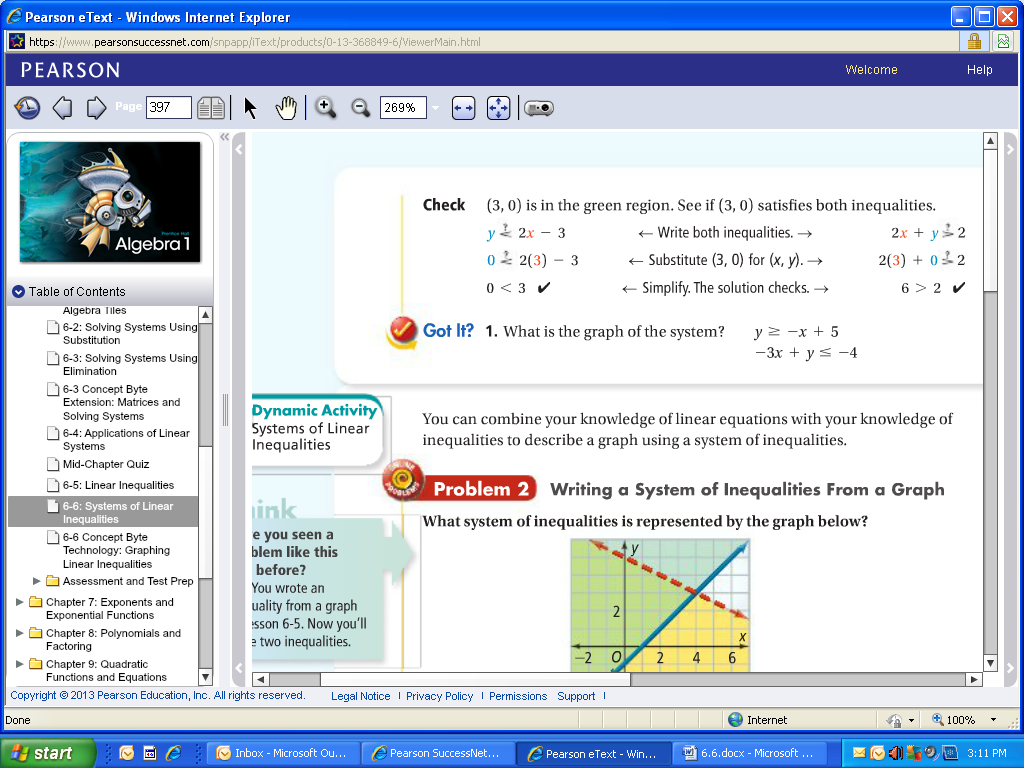


**Problem 1:** Graphing a System of Inequalities



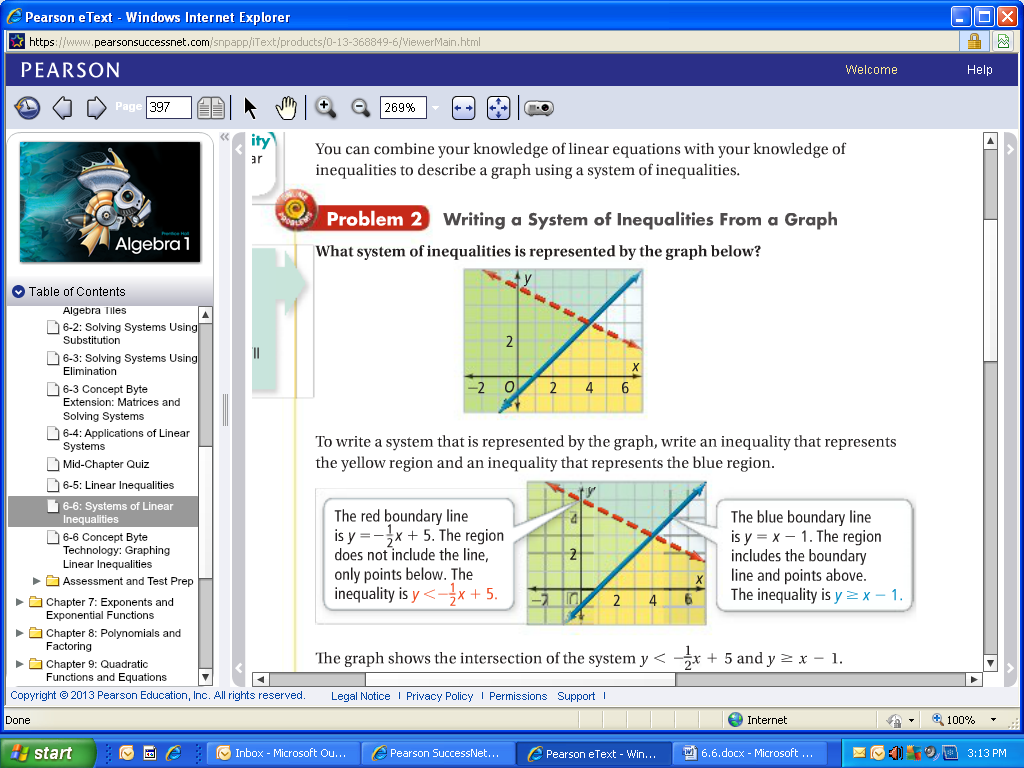
Check:

Your Turn!



Check:

**Problem 2:**Writing a System of Inequalities from a Graph



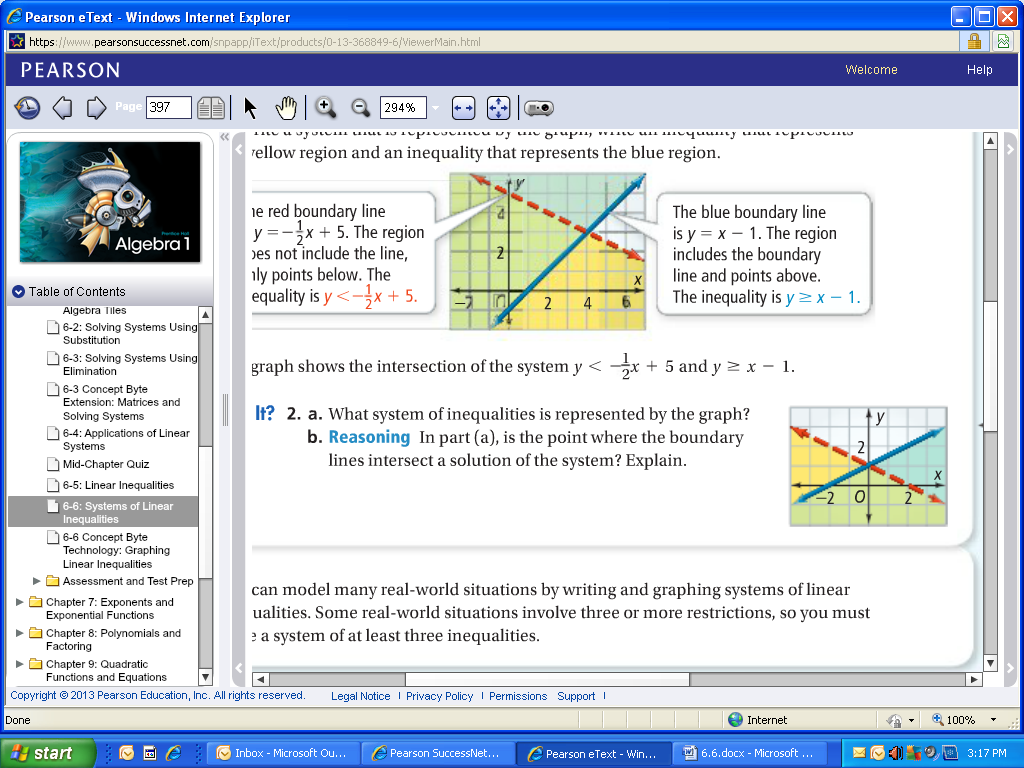
Green

Yellow

Blue

To write a system that is represented by the graph, write an inequality that represents the yellow region and an inequality that represents the blue region. Where they intersect is the green region.

1. Identify boundary lines:
2. Decide which inequality symbol to use (which direction)

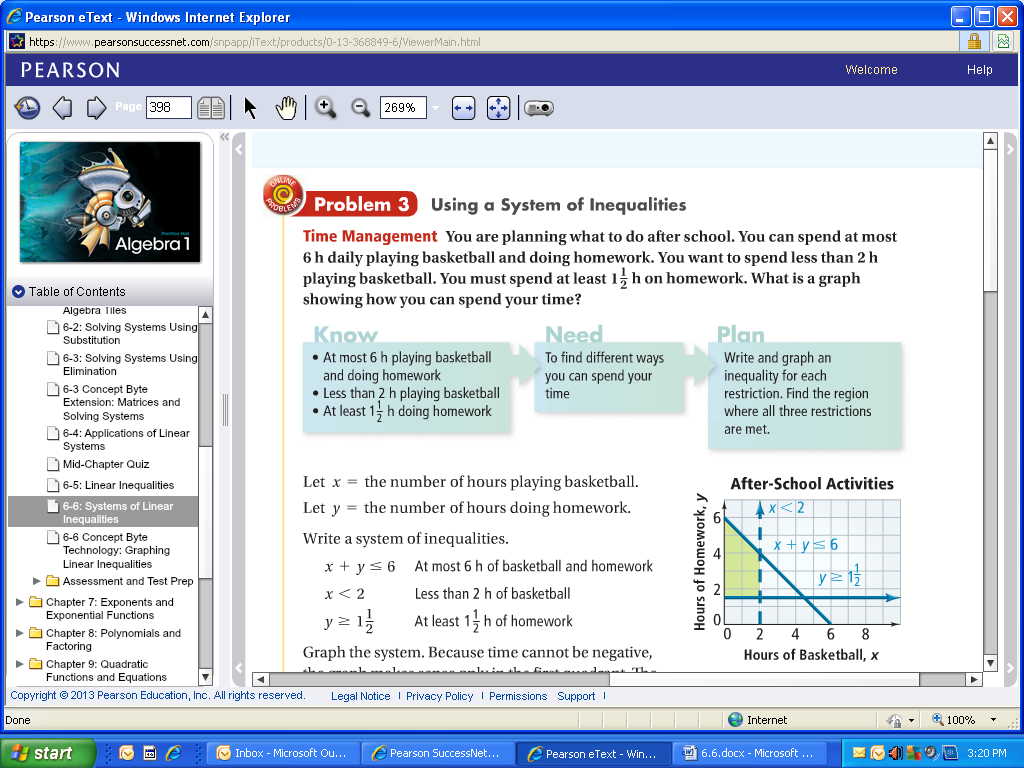
Your Turn!

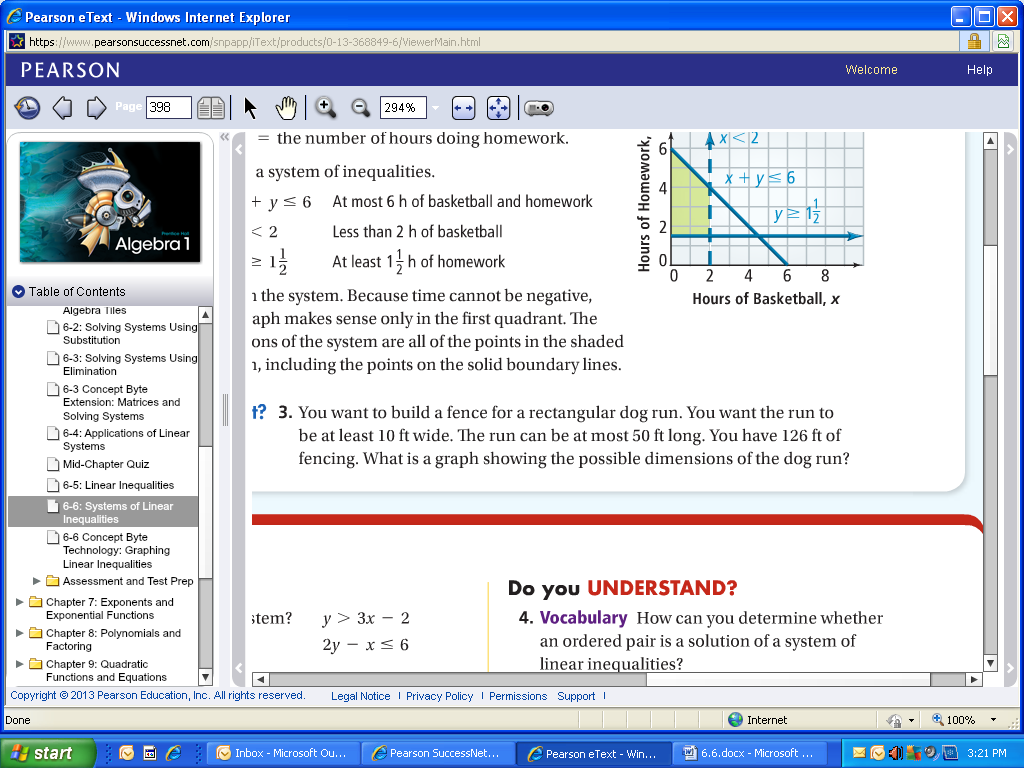
Green

Blue

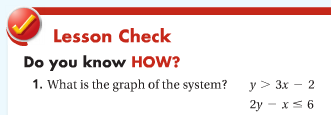
Yellow

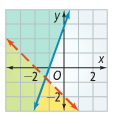
**Problem 3:**Using a System of Inequalities











Blue

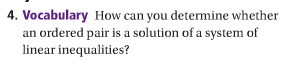


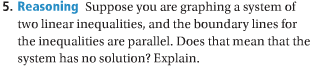
Green

Yellow



1. Cherries cost $4/lb. Grapes cost $2.50/lb. You can spend no more than $15 on fruit, and you need at least 4 lb in all. What is the graph showing the amount of each fruit you can buy?







Hw: Section 6.6 p. 403 #7-25 odd, 26 (use graph paper)