

The Muro Manufacturing Company makes two kinds of plasma screen television sets. It produces the Flexscan set that sells for \$350 profit, and the Panoramic I that sells for \$500 profit. On the assembly line, the Flexscan requires 5 hours labor and the Panoramic I requires 7 hours. The cabinet shop spends one hour for each Flexscan cabinet and 2 hours on each Panoramic I cabinet. Both kinds require 4 hours for the testing and packing of each set. On a particular production run, the company has available 3600 work-hours on the assembly line, 900 in the cabinet shop, and 2600 in the testing and packing department. How many sets of each type should be produced to obtain the maximum profit, and what would the profit be?

1. Define the variables and give all constraints in terms of them.
2. Graph the feasible region.
3. Use algebra to find the coordinates of each corner point that is not on one of the coordinate axes.
4. Make a table of profit at each corner point other than $(0, 0)$.
5. Write a sentence stating your conclusion.