

Superbats, Inc. manufactures two different quality wood baseball bats, The Slugger and the Dinger. The Slugger takes 8 hours to trim and turn on a lathe and 2 hours to finish it. It has a profit of \$17. The Dinger takes 5 hours to trim and turn on a lathe and 5 hours to finish, and its profit is \$29. The total time per day available for trimming and lathing is 80 hours and for finishing is 50 hours.

- a) Define your variables. Write a system of inequalities to represent the number of Sluggers and Dinger that can be produced per day.

- b) Draw the graph showing the feasible region.

- c) Write a function expressing the profit per day.

- d) How many of each type of bat should be produced to have the maximum profit? What is the maximum profit?