

Homework 8

Curtis and Hassan Make Choices

1. Curtis goes into the pet store to buy a substantial supply of food for his pet. He sees that Food A cost \$2 per pound and that Food B cost \$3 per pound. Because he intends to vary his pet's diet from day to day anyway, he isn't especially concerned about how much of each type of food he buys.



- a. Suppose that Curtis has \$30 to spend. Come up with several combinations of the two foods that he might buy, and plot them on an appropriately labeled graph.
- b. Come up with some combinations that Curtis might buy if he were spending \$50, and plot them on the same set of axes used in Question 1a.
- c. What do you notice about your answers to Questions 1a and 1b?

2. Hassan has a feeling there's going to be a big demand for his work. He is considering changing his prices so that he earns a profit of \$50 on each pastel and \$175 on each watercolor.



- a. Based on these new profits for each type of picture, find some combinations of watercolors and pastels so that Hassan's total profit would be \$700, and plot them on a graph. (*Note: The combinations you give here don't have to fit Hassan's usual constraints.*)
- b. Now do the same for a total profit of \$1,750, using the same set of axes.
- c. What do you notice about your answers to Questions 2a and 2b?