

Linear Programming Problem Formulation (Graphical)

In this quiz we will just set-up the problem. We will find a solution in future problems.

The Jack Dog Food Company wants to maximize the company's Marketing ROI from media investment over the next month. Jack promotes through social media and newspapers. The company estimates the average profit per view in newspapers is \$2 and social media is \$7. The Jack Dog Food Company has a monthly promotion budget of \$240. Social media cost \$4 and newspaper \$5 per Ad. The company has 100 work-hours available to develop and maintain promotions. Each newspaper ad takes 1 work-hour and each social media event requires 3 work-hours.

1. What are Jack's two decision variables? Label the first decision variable X1 and the second X2.
2. What is Jack's Objective (Goal)?
 - i. Maximize Profit or Minimize Cost
3. Write the Objective function in terms of the decision variables (how much profit from each X1 and each X2)?
4. Determine the constraints.
 - a. What is constraint for Budget?
 - b. What is constraint for Work Hours?