**Question #1**

Sandra’s family loves ice cream. She has enough money for 7 litres of ice cream. The shop sells vanilla ice cream and chocolate ice cream. She needs to buy at least 4 litres of ice cream or her family will be angry. Vanilla ice cream has 200 calories per litre and chocolate has 250 calories per litre. How much of each type should she buy to minimize her family’s calorie intake?



Step 1 – Define your variables

Step 2 – Write inequalities from the paragraph.

 There may be hidden inequalities.

Step 3 – Put the inequalities on your graph.

Step 4 – Write an equation for calories.

Step 5 – Test ALL of the corners to find the combination with the lowest cost.

Step 6 – Answer in a sentence.

**Question #2**

Daniel is going to buy meat at the market. The butcher has beef and chicken on sale for $1 per pound. Daniel has $11. The butcher has 6 pounds of beef and 7 pounds of chicken in stock. Daniel can make 2 meals from a pound of beef and 3 meals from a pound of chicken. How can he make the most meals from the meat he buys today? How many meals will that be?

Show all 6 steps!

**Question #3**

Stanley is decorating his house. He needs to buy some paint. A gallon of white paint can cover 2 walls. A gallon of blue paint can cover 4 walls because you only need one coat. Stanley has enough money for 8 gallons of paint. The hardware store has 4 gallons of blue paint and 9 gallons of white paint. How much of each should he buy so he can paint the most walls?

**Question #4**

Bonnie needs to buy vegetables for her restaurant. She has to buy at least 9 pounds of vegetables. Her supplier has 8 pounds of broccoli and 5 pounds of cauliflower. Broccoli costs $3 per pound and cauliflower costs $4 per pound. To help her budget, Bonnie needs you to find the most and least she can spend on vegetables.

