1.

At the kickoff of a football game, the receiver catches the ball at the left side of the goal line and runs for touchdown diagonally across the field. How many yards would he run? (football field is 100 yards long and 160 feet wide)

2.

At a large size U.S company, the profit, y is related to the number of Vice Presidents, x according to the equation y=-25$x^{2}$+300x. What number of Vice presidents will maximize the company profit? What is the maximum possible profit in millions?

3.

At the denver Broncos game the number of tickets sold decreases with increasing price, but the total revenue generated for the broncos team does not necessary decrease. Use the formula R=p(48000-400p) to determine the revenue when the price p of each ticket is 20dollars and when the price p is 25 dollars. What price would produce revenue of 1.28 million dollars? Use the graph to find the price that determines the maximum revenue for his Broncos football team.

4.

Ken has just got a job offer and been commuting 60 miles each way to and from work. Returning home one evening he increased his average speed 9 miles per hour above the rate on the way to work. This increase in miles per hour reduced his return time by 20 minutes. What was his average speed going to work and returning home.

(solving rational inequality) State and graph solution set

5.



6.



7.

Solve method of choice (7 and 8)



8.



9. vertex and intercept –sketch graph and state domain and range

