MATH 091 – Elementary Algebra I
Applications of Linear Equations

COLLEGE FOOTBALL:

One of the factors used to determine which teams will be selected in a post season College football bowl game is its fan base. The organization committee for an inaugural bowl game in Montreal, Canada estimates the number of fans, N, that will travel to the game is given by the equation $N = \frac{1.25P_1P_2}{d^2}$. Where $P_1 =$ The student population of the team, $P_2 =$ The number of living alumni, and d = The distance between the College and the bowl game destination, Montreal, Canada.

1. Find the number of living alumni of a team that has a student body of 38,400 that expects 15000 fans to travel, given the distance between the College and Montreal is 800 miles.

2. The College of Jonesboro is 1400 miles away from Montreal. If there are 12,000 students at this College and 55,000, living alumni, approximately how many fans would the organization committee expect to travel, if this college were to be selected to play in this bowl game?