

## Unit 6 Discussion Example – Post 2: Reply to a Classmate

Hi Classmate! You live in Cedar Park, TX. I live in Boulder, CO.

- a) The distance from Cedar Park, TX to Boulder, CO is about 954.4 miles.

The population of Cedar Park is 75,704.

The population of Boulder is 107,125.

The average number of phone calls can be calculated using  $d = 954.4$ ,  $P_1 = 75,704$ ,  $P_2 = 107,125$

$$C = \frac{0.02P_1P_2}{d^2}$$

$$C = \frac{(0.02)(75,704)(107,125)}{954.4^2}$$

$$C = \frac{162,195,820}{910,879.36}$$

$$C = 178.0651$$

The average number of calls between Cedar Park, TX and Boulder, CO is about 178 calls.

- b) Between Austin, TX and Cedar Park there were 3,527,739 calls, but between Boulder, CO and Cedar Park there were only 178 calls, but between. That is a huge difference!! The main reason for that the distance is so much bigger. You are calling between CO and TX! Since distance is in the denominator, this is an inverse variation. When distance does UP, the number of calls goes DOWN.