

I) In MST 109 you get a B if you score anywhere between 83 and 87. Collecting the grades of all MST109 students in a certain year we notice that scores form approximately a normal distribution with mean $\mu = 78$, and standard deviation $\sigma = 12$.

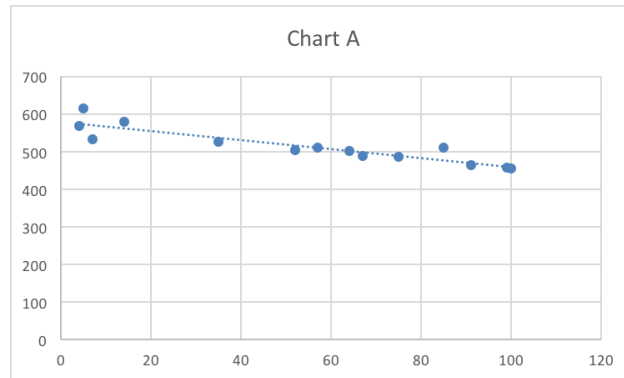
a) Using the Normal distribution, find the percentage of the students that got B.

b) How much should your grade be to fall into the top 5 percentile of the class during that year.

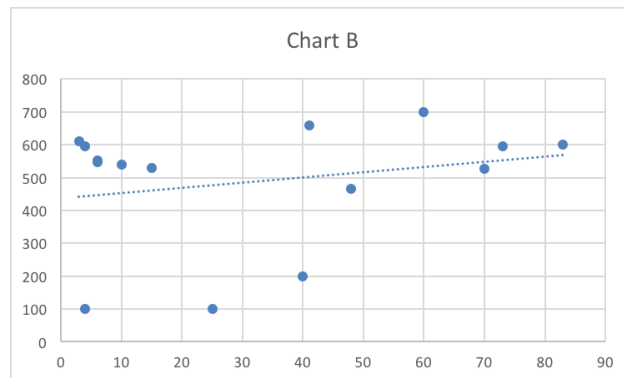
II) Find the mean and the standard deviation of a normal distribution where 75% of its population fall under the value 90 and its mean μ and standard deviation σ satisfy the equation $\mu = 85 + \sigma$.

III) Consider the following 3 scatter plots. The correlations values for those charts are given by $r_1 = 0.24$, $r_2 = -0.9$ and $r_3 = 0.87$.

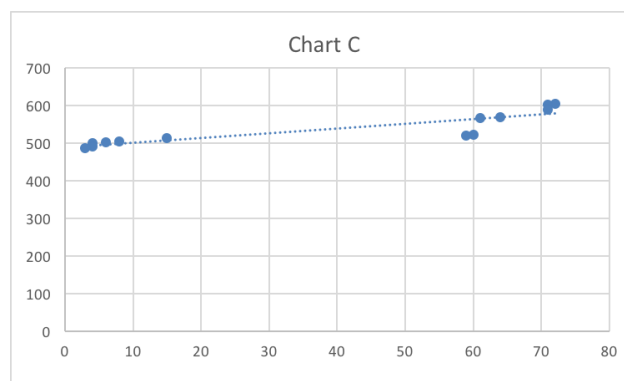
a) Match each of these correlation values to the appropriate scatter plot given bellow.



Correlation of Chart A is :



Correlation of Chart B is :



Correlation of Chart C is :

b) For each of the scatter charts above mention if the association is positive or negative.