Groupwork PS 9.5

$\bar{X} = 300$

confidence level = 95%

$\alpha = 5\% = 0.05$

$X = 400$

a) $\bar{X} = (260 + 340)/2 = 300$

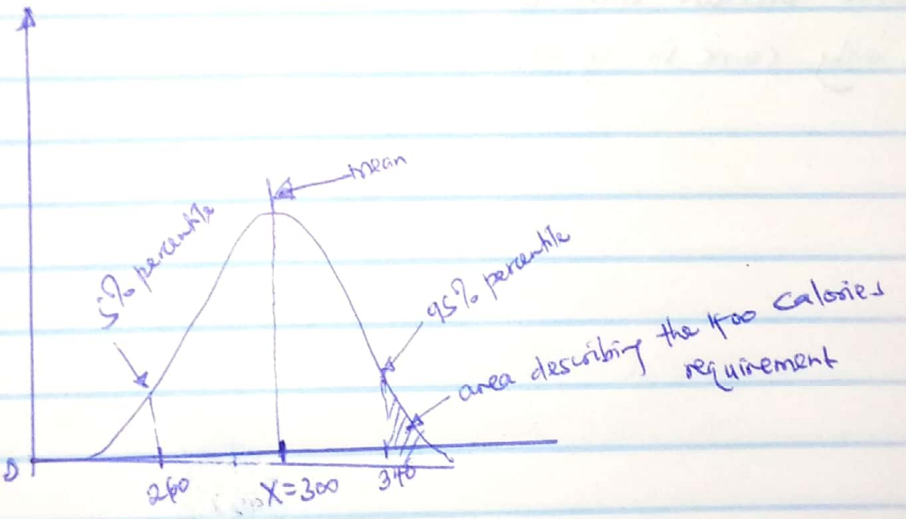
(b) Z-score = 1.92.

$$Z = \frac{\bar{X} - \mu}{\sigma}$$

$$1.92\sigma = \bar{X} - \mu$$

$$\sigma = \frac{\bar{X} - \mu}{1.92} = \frac{40}{1.92} = 20.833$$

c)



Z-score = 1.92

P(X > 400)

$$Z\text{-score} = \frac{400 - 300}{20.833} = 4.8$$

P(4.8)

$P(X > 400) = 0.9997$

It is unusual because its z-score is beyond 1.96

If the average is 350 and there is a room for the calorie content to be between 280 - 420

No, they rule out the actual fact that the burgers have 400 calories The standard deviation is specifically for placing the calories between 260 - 340

It leads us to make wrong conclusions about the data set (hamburgers). Deviations will be measured from the wrong position the value of the z-score we get will lead us to get an unrealistic probability of the data set

They can't because this is an advantage to the customers. They should only come in if the customers rights have been violated.