Class Exercise

1. **Swiss Cheese**

As food hygiene standards have improved, fewer holes are appearing naturally in Swiss cheeses. Dairies are now forced to artificially create them. The table shows the number of holes per slice and the corresponding number of slices observed:

Number of Holes	Number of Slices
0	4
4	51
6	18
8	52
10	23
12	8
14	4

a. Calculate the average number of holes per slice.

b. Calculate the variance and standard deviation for the number of holes per slice. Include units in your answers.

c. Which is the more appropriate graphical representation for this data: a bar chart or a histogram? Explain briefly **and** describe the shape of the distribution of holes per slice.

2. **Flamingos**

Flamingoes that migrate to spend their winters in the sun age more slowly than the ones that stay put. A group of flamingoes was observed, and the number of days they spent migrating during the year was recorded.

Days Spent Migrating	Number of Flamingoes
$[0, 20)$	12
$[20, 40)$	28
$[40, 60)$	45
$[60, 80)$	35
$[80, 100)$	20

a. Calculate the mean number of days spent migrating for this group of flamingoes.

b. Calculate the variance and standard deviation for the number of days spent migrating. Include units in your answers.

c. The empirical rule states that at least 95% of the data can be found within two standard deviations of the mean (i.e. $\overline{x} \pm 2s$). Determine the interval for the number of days that we would expect 95% of flamingos to spend migrating during the year.