<u>Summary</u>

• In order to fit normal distribution to the given data, we first calculate mean μ and standard deviation σ from the given data. Then, the normal curve fitted to the given data is given by

• To calculate the expected normal frequencies, we first find the standard normal variates corresponding to the lower limits of each of the class intervals, i.e. we compute $z=(x-\mu)/\sigma$, where x is the upper limit of the class interval. Then, the areas under the normal curve to the left of the ordinate z, say $\Phi(z)=P(Z\leq z)$ are computed from the tables. Finally, the areas for the successive class intervals are obtained by subtraction $\Phi(z)$ - $\Phi(z-1)$ and on multiplying these areas by N, the total frequency, we get the expected normal frequencies.

• In order to fit an exponential distribution to the given data, we first estimate the parameter of the distribution by its m.l.e

• Then, the exponential curve fitted to the given data is given by $f(x)=\theta e^{-x\theta}, x>0.$

• To calculate expected frequencies, we first write the upper limits of each class interval. Then, the probability below the upper limit is calculated using the formula $P(X < x)=1-e^{-x\theta}$.

• Finally, the probabilities for the successive class intervals are obtained by subtraction and on multiplying these probabilities by N, the total frequency, we get the expected exponential frequencies.