

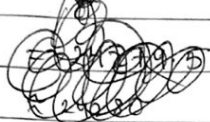
LAB 2.1

Q1] What is the frequency of deaths measured from 2006 - 2009

$$\Rightarrow \begin{array}{rcl} 2006 & - & 6605 \\ 2007 & - & 712 \\ 2008 & - & 8801 \\ 2009 & - & 1790 \end{array}$$

$$\underline{97118}$$

$$\text{frequency} = 97118$$



\therefore from 2006-2009, the frequency of deaths per year was ~~97118~~ 97118

Q2] What % of deaths occurred after 2009?

$$\Rightarrow \begin{array}{rcl} 2010 & - & 32020 \\ 2011 & - & 21953 \\ 2012 & - & 768 \end{array}$$

$$\underline{342841}$$

$$\% = \frac{342841}{823856} \times 100$$

$$\boxed{\% = 41.6\%}$$

Q3] Relative frequency of deaths

$$\Rightarrow \text{Relative frequency} = \frac{2000 + 2001 + 2002 + 2003}{823356}$$

$$= \frac{67092}{823856}$$

$$= \boxed{0.081}$$

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Q4] % of deaths in 2004

$$\Rightarrow \% = \frac{228802 \times 100}{823856}$$

$$\text{Ans} = \underline{\underline{27.77\%}}$$

Q5] What kind of data are the numbers of deaths?

\Rightarrow Quantitative discrete.

Q6] What kind of data are these numbers?

\Rightarrow Quantitative discrete.

Q7] Mean of the above data

$$\Rightarrow \text{mean} = \frac{\text{total}}{\text{no. of values}}$$

$$= \frac{823856}{13}$$

$$\text{[mean} = \underline{\underline{63373.54}}]$$

Q8] Mode of the above data

\Rightarrow there is no particular mode for this data because no value occurs more than once
and hence multiple modes exist.

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Q9] Median of the data

⇒ We arrange the data in ascending order, we get

231, 712, 768, 1790, 6605, 11685, 21357, 21953, 33819, 88003,
88011, 228802,
320120

$$n = 13$$

since n is odd,

$$\text{median} = \frac{n+1}{2}^{\text{th}} \text{ term in the list}$$

$$= 7^{\text{th}} \text{ term}$$

$$[\text{median} = \underline{\underline{21357}}]$$

Q10] Standard deviation

$$\Rightarrow n = 13$$

$$m = 63373.54$$

$$\Sigma x = 823856$$

$$\begin{aligned} \text{standard deviation} &= \sqrt{\frac{\Sigma (x_i - m)^2}{N}} \\ &= \sqrt{\frac{(231 - 63373.54)^2 + \dots + (320120 - 63373.54)^2}{13}} \end{aligned}$$

$$= \sqrt{\frac{120373263729.23}{13}}$$

$$[\sigma = \underline{\underline{96226.20}}]$$

Q11] Coefficient of variation

$$\Rightarrow CV = \frac{\sigma}{m} \times 100 = \frac{96226.20}{63373.54} \times 100 = \underline{\underline{151.84\%}}$$