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Dep#: BSSE

Q1

"Solution"

Given:-

423, 369, 387, 411, 393, 394, 371, 377, 389, 409,
 392, 408, 931, 401, 363, 391, 405, 382, 400, 381
 400, 381, 399, 415, 428, 422, 396, 372, 410,
 419, 386, 398

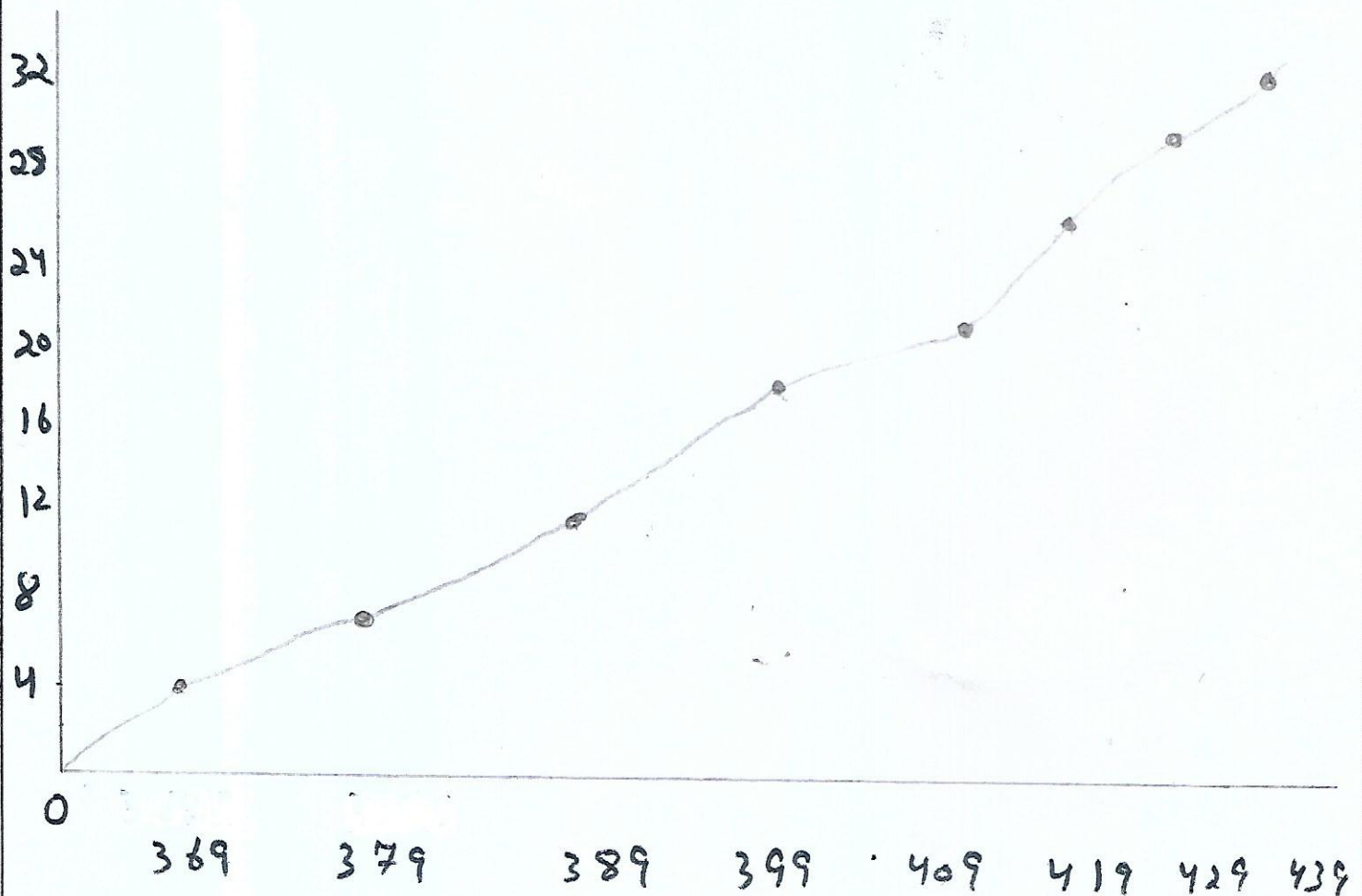
Now:Frequency distribution Table

Batteries	Tally	$f(x)$	$cf(x)$
360-369		2	2
370-379		3	5
380-389	 	5	10
390-399	 	7	17
400-409	 	5	22
410-419		4	26
420-429		3	29
430-439		1	30
		30	

Q1) Commulative Frequency Curve

Sol

Given: 423, 369, 387, 411, 393, 394, 371, 372,
389, 409, 392, 408, 431, 401, 383, 381,
405, 382, 400, 381, 399, 415, 428, 422,
398, 372, 410, 419, 388, 390.



Calculate Mean

423, 369, 387, 411, 393, 394, 371, 377, 389, 409, 392,
 408, 431, 401, 363, 391, 405, 382, 400, 381, 399,
 415, 428, 422, 396, 372, 410, 419, 386, 390

Solution

$$\bar{x} = \frac{\sum x}{n}$$

$$x = \frac{x_1 + x_2 + x_3 + \dots + x_n}{n}$$

$$x = \frac{423 + 369 + 387 + 411 + 393 + 394 + 371 + 377 + 389 + 409 + 392 + 408 + 431 + 401 + 363 + 391 + 405 + 382 + 400 + 381 + 399 + 415 + 428 + 422 + 396 + 372 + 410 + 419 + 386 + 390}{30}$$

$$x = \frac{11914}{30}$$

$$x = 397.13$$

Q2

Geometric Mean

$$G.M = \sqrt[n]{x_1 \times x_2 \times x_3 \dots x_n}$$

Given Data:-

$$G.M = \sqrt[30]{\begin{array}{l} 423 \times 369 \times 387 \times 411 \times 393 \times 394 \times 371 \times 377 \times 389 \times 409 \\ \times 392 \times 408 \times 431 \times 401 \times 363 \times 391 \times 405 \times 382 \times 400 \\ \times 381 \times 399 \times 415 \times 428 + 422 \times 396 \times 372 \times 410 \times 419 \\ \times 386 \times 390 \end{array}}$$

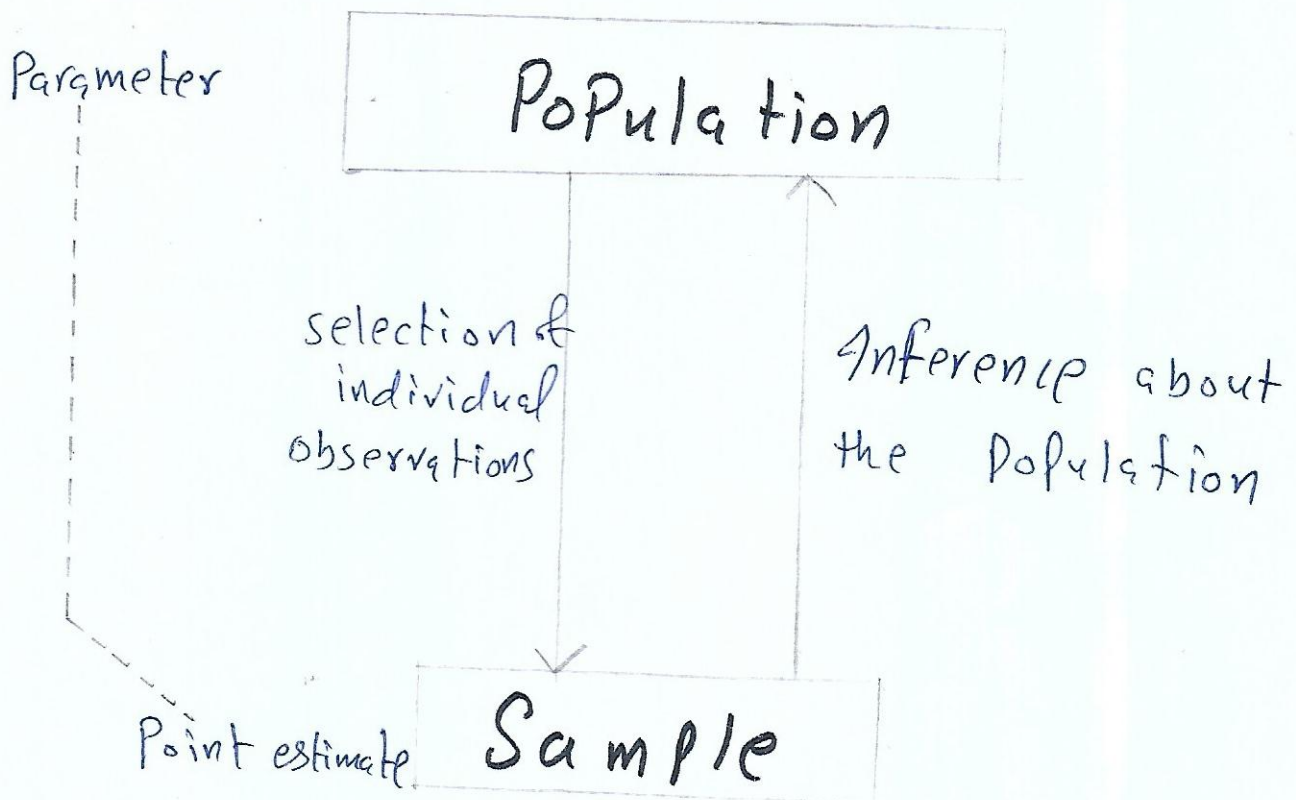
$$G.M = \sqrt[30]{2.288 \times 10^{75}}$$

$$G.M = 2.288 \times 10^{15} \text{ Ans}$$

Q3) Define the following terms:

Q) Population And Sample:-

The entire group of individuals to be studied is called the Population. A sample is a subset of the population that is being studied.



Q3
(B)

The Range:

The range is the difference between the largest and smallest values that occur in a set of data.

(OR)

The difference between the maximum and minimum value in a data set.

$$R = \text{Max} - \text{Min}$$

Example: Pulse rate of 15 male residents of a certain village.

54 58 58 60 62 65 66 71

74 75 77 78 80 82 85

$$R = 85 - 54 = 31 \rightarrow \text{Range}$$