

Iterative cumulated distributions :

In sometimes the researcher may need to know that less than certain value or above certain value, and then resort to create cumulative distribution tables (less than or more than) .The types of Iterative cumulated distributions are :

1.Upper of cumulative repetition distribution : to create upper of cumulative frequency table by calculating the total of frequencies (the number of values) that is less than all limits of categories .

Example 1.The recurring table shows the distribution of 40 cows in milk production farm according to amount of milk produced per day for each .

| Milk yield (liter) | 18 - | 22 | 26 | 30 | 34 - 38 | Sum |
|--------------------|------|----|----|----|---------|-----|
| No. of cows | 4 | 9 | 15 | 8 | 4 | 40 |

Find the following :

11. to Create of ascending cumulative repetition table ?

2. to Create of ascending cumulative repetition table ?

3.draw of relative ascending cumulative repetition table?

4. from the curve, find the following:

A. proportion of cows that produced about 28 liters of milk.

B. amount of milk yield that produced from 25% of the cows.

C. amount of milk yield that produced from 50% of the cows .

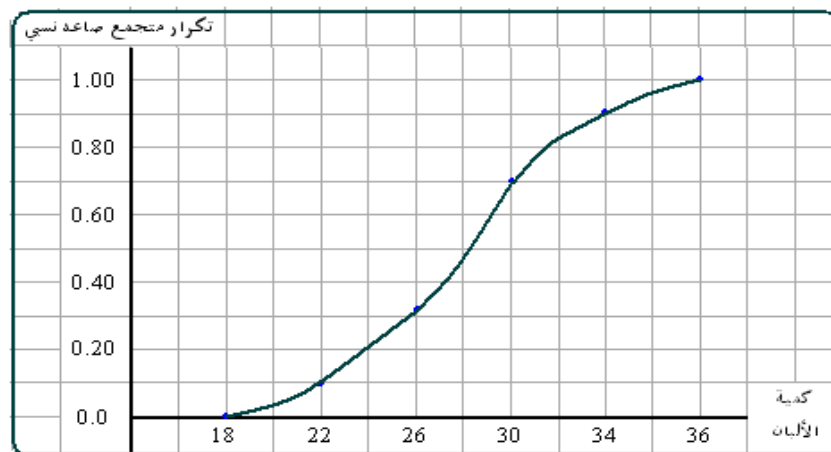
frequency distribution

| Milk yield (liter) | Repetitions (No. of cows) |
|--------------------|---------------------------|
| (X) | (Y) |
| 18 - | 4 |
| 22 - | 9 |
| 26 - | 15 |
| 30 - | 8 |
| 34 -38 | 4 |
| Sum | 40 |

2. to create upper of relative cumulative frequency distribution table ?

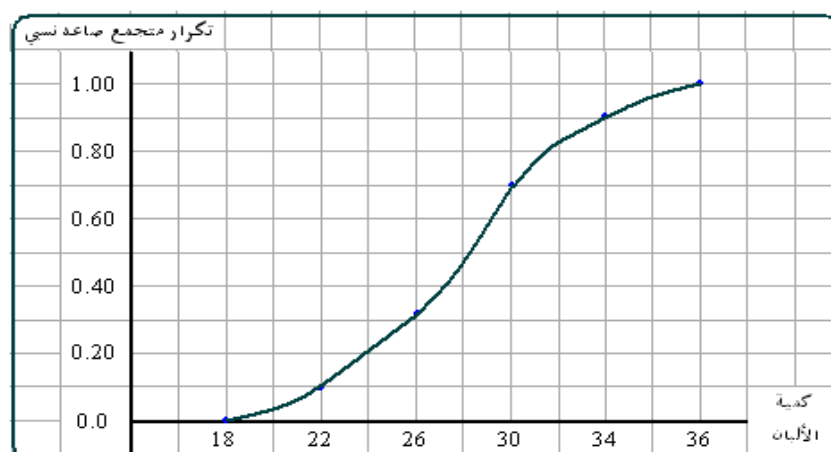
| Milk yield (liter (X) | Upper cumulative repetition | Upper of relative cumulative repetition |
|------------------------|-----------------------------|---|
| Less than 18 | 0 | 0.00 |
| Less than 22 | 4 | 0.10 |
| Less than 26 | 13 | 0.325 |
| Less than 30 | 28 | 0.70 |
| Less than 34 | 36 | 0.90 |
| Less than 38 | 40 | 1.00 |

3.draw upper of relative cumulative recursive curve ?

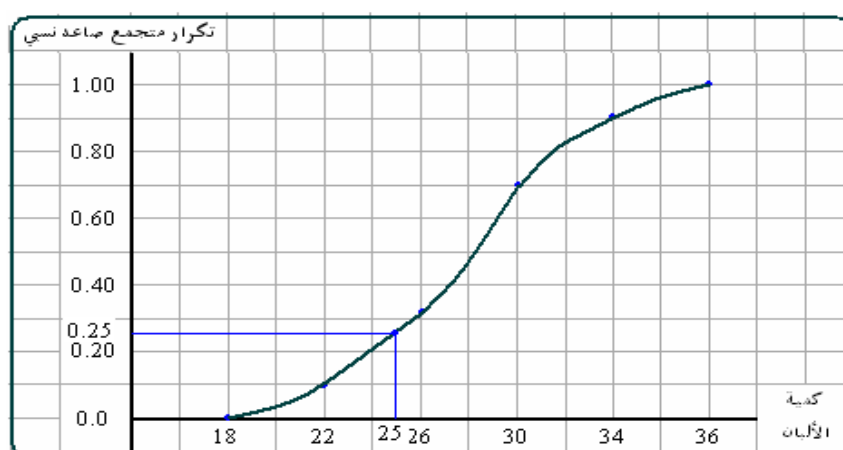


4.from Upper of relative cumulative repetition Relative are :

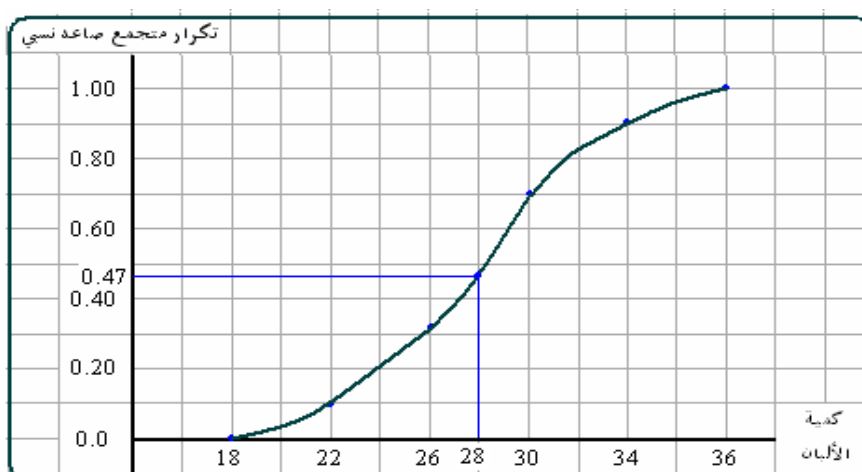
A. proportion of cows that produced at least 28 liters of milk is almost 0.47 .



B. amount of production by at least about 25% of the cows is 25 liters of milk .



C. amount of production by at least about 50% of the cows is 28.50 liters of milk is called median .



2-Lower of cumulative recurring table : to create lower of cumulative frequency table by calculating the total of frequencies (the number of values) that is equal or exceeding of all categories limits .

Example 2. The recurring table shows the distribution of 40 cows in milk production farm according to amount of milk produced per day for each cow .

| Milk yield (liter) | 18 - | 22 | 26 | 30 | 34 - 38 | Sum |
|--------------------|------|----|----|----|---------|-----|
| No. of cows | 4 | 9 | 15 | 8 | 4 | 40 |

Find the following :

1.To create the lower of cumulative recurring distribution .

2.Draw a curved of lower relative cumulative frequency .

1. To create the lower of cumulative recurring distribution .

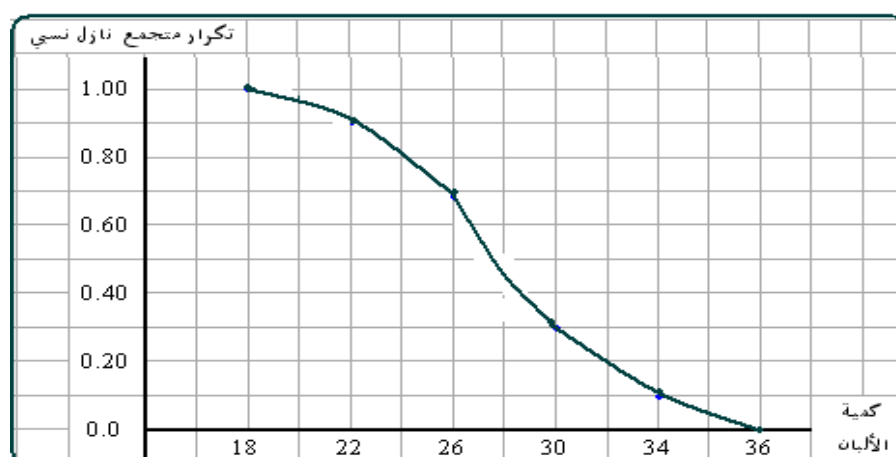
Frequency distribution

| Milk yield (liter) (X) | Repetitions (No. of cows) (Y) |
|---------------------------|----------------------------------|
| 18 - | 4 |
| 22 - | 9 |
| 26 - | 15 |
| 30 - | 8 |
| 34 -38 | 4 |
| SUM | 40 |

Lower of relative cumulative frequency distributions :

| Milk yield (liter(X) | Lower of cumulative repetition | lower of relative cumulative repetition |
|-----------------------|-----------------------------------|--|
| More or equal than 18 | 40 | 1.00 |
| More or equal than 22 | 36 | 0.90 |
| More or equal than 26 | 27 | 0.675 |
| More or equal than 30 | 12 | 0.30 |
| More or equal than 34 | 4 | 0.10 |
| More or equal than 38 | 0 | 0.00 |

2. Draw a curved of lower relative cumulative frequency .



- The graphical presentation of the qualitative data :

The data of descriptive of variable were shows in form of a graphic circle or graphic columns and through to describe and compare these groups or variable levels .

Diagram circuit : To show descriptive variable data in form of a graphic circle .It is distributing of 360 degrees according to the distribution of the relative frequency of the variable groups, where you specify of amount of the special angle that number (r) by applying the following equation :

$$\text{amount of the angle} = \text{relative frequency of the group} \times 360^\circ .$$

Example 3. Recurring table shows the sample of 500 families were distributed according to region in which it belongs .

| Region | Al-Makdadia | Khanaqin | Al-Khalis | Baaquba | Total |
|-----------------|-------------|----------|-----------|---------|-------|
| No. of families | 150 | 130 | 50 | 170 | 500 |

Solution :

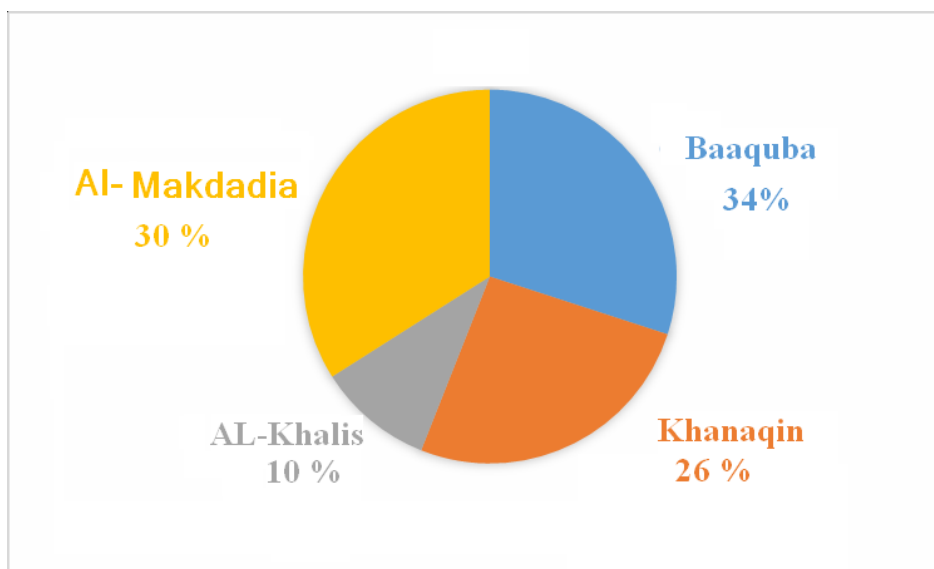
1.Determine amount of allocated angle to each area by applying the following equation :

$$\text{amount of allocated angle to each area} = \text{relative frequency of the area} \times 360^\circ .$$

| Region | No. of families | Relation repetition | Amount of angle |
|-------------|-----------------|---------------------|---------------------------------|
| Baaquba | 170 | 0.34 | $360 \times 0.34 = 122.4^\circ$ |
| Khanaqin | 130 | 0.26 | $360 \times 0.26 = 93.6^\circ$ |
| Al-Khalis | 50 | 0.10 | $360 \times 0.10 = 36^\circ$ |
| Al-Makdadia | 150 | 0.30 | $360 \times 0.30 = 108^\circ$ |
| Sum | 500 | 1.00 | 360° |

2. Draw diagrams circuit : The diagrams circle are drawn and divide it into four parts and each part of area was commensurate with amount of angle allocated, as shown in the following figure :

Figure 7. The diagrams circuit of sample size is 500 of families were distributed according to region .



We notes from the figure above, percentage of families that belong to the Baaquba area are about 34% is the highest percentage in the sample, while noting that the proportion of families in the AL-Khalis area is about 10% is the lowest rate in the sample.