# Assignment 3

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## CBSE 9th Statistics

**Question:** (Exercise 14.3 Q4) $\Rightarrow$ The length of 40 leaves of a plant are measured correct to one milimetre,and the obtained data is represented in the following table:

| Length(in mm) | Number of leaves |
|---------------|------------------|
| 118-126 | 3 |
| 127-135 | 5 |
| 136-144 | 9 |
| 145-153 | 12 |
| 154-162 | 5 |
| 163-171 | 4 |
| 172-180 | 2 |

TABLE I



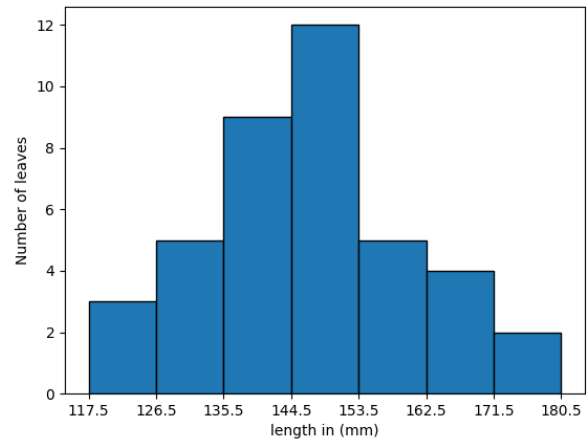Fig. 1.

(i) Draw a histogram to represent the given data.
(ii) Is there any other suitable graphical representation for the same data?
(iii) Is it correct to conclude that the maximum number of leaves are $153$ mm long ? why?

**Solution:**

(i) The data given in the question is represented in discountinuous class interval. So, we have to make it in continuous class interval.the difference is 1,so taking half of $1$ ,we subtract $1/2 = 0.5$ from lower limit and add $0.5$ to the upper limit.Then the table becomes:

| Length (in mm) | Number of leaves |
|----------------|------------------|
| 117.5-126.5 | 3 |
| 126.5-135.5 | 5 |
| 135.5-144.5 | 9 |
| 144.5-153.5 | 12 |
| 153.5-162.5 | 5 |
| 162.5-171.5 | 4 |
| 171.5-180.5 | 2 |

TABLE II

(ii) Yes ,the data given in the question can also be represented by frequency polygon.
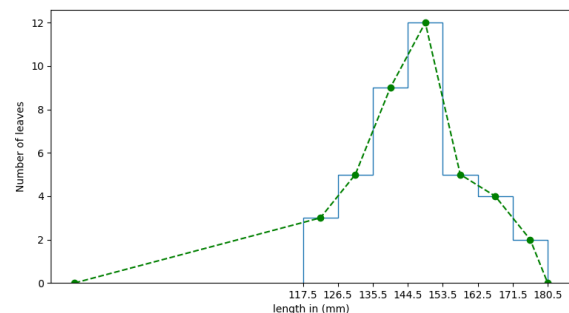


Fig. 2.

(iii) No,we cannot conclude that the maximum number of leaves are $153$mm long because the maximum number of leaves are lying in-between the length of $144.5 - 153.5$