

Lesson # 3

Aim: How do we display data? PART II

Sec. 2.9 - Do Now Page 71/2 (Brown Book)

2. Recreational skiing is big business in some of the western and New England states. Many recreational skiers are beyond the beginning level and want intermediate or "more difficult" terrain (but not the most difficult). *Snow Country* described the 35 top-rated ski areas and gave the percentage of the skiing terrain that was at the more difficult level. The percentages follow:

36	54	51	49	30	43	40	46	35	40	52	28
57	51	40	40	45	40	60	20	25	50	40	65
58	43	59	49	55	30	33	60	30	46	65	

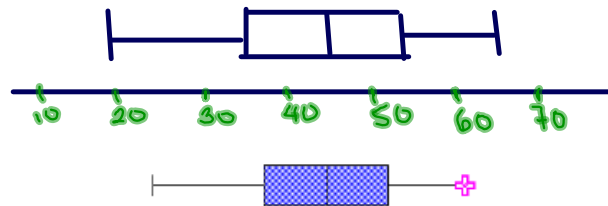
Use five classes.

① Use the calculator to enter the data.

n	=35
minX	=20
Q1	=36
Med	=45
Q3	=54
maxX	=65

5 point SUMMARY

WE USE THEM TO CREATE A BOX - WHISKER



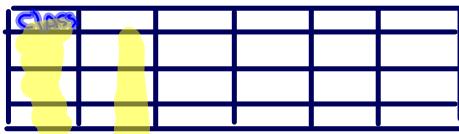
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Use five classes. → into a table

tasks

- ① to find the minimum value = 20
- ② to find the maximum value = 65

class - a group of numbers



with the same amount of #s in each class = class length

- ③ to create classes (5 classes - given)

$$\text{Class length} = \frac{\text{MAX VALUE} - \text{min value}}{\# \text{ OF CLASSES}}$$

$$C.L = \frac{65 - 20}{5} = 9 \rightarrow \text{Approx. } \underline{\underline{10}}$$

CLASS BOUNDARIES	CLASSES	tally	frequency	MID POINT	Relative Freq.	Cumulative Freq.
19.5 - 29.5	20 - 29		3	24.5	$\frac{3}{35} \times 100 = 8.6\%$	3
29.5 - 39.5	30 - 39		6	34.5	$\frac{6}{35} \times 100 = 17.1\%$	9 = (3+6)
39.5 - 49.5	40 - 49		13	44.5	$\frac{13}{35} \times 100 = 37.1\%$	22 = (3+6+13)
49.5 - 59.5	50 - 59		9	54.5	$\frac{9}{35} \times 100 = 25.7\%$	31 = (3+6+13+9)
59.5 - 69.5	60 - 69		4	64.5	$\frac{4}{35} \times 100 = 11.4\%$	35

$n = 35$

example to create class boundaries

LOWER CLASS Limit



$$\frac{30 - 29}{2} = 0.5$$

I- Display the information from the table.

- Histogram
- Frequency polygon
- Ogive

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n = 35

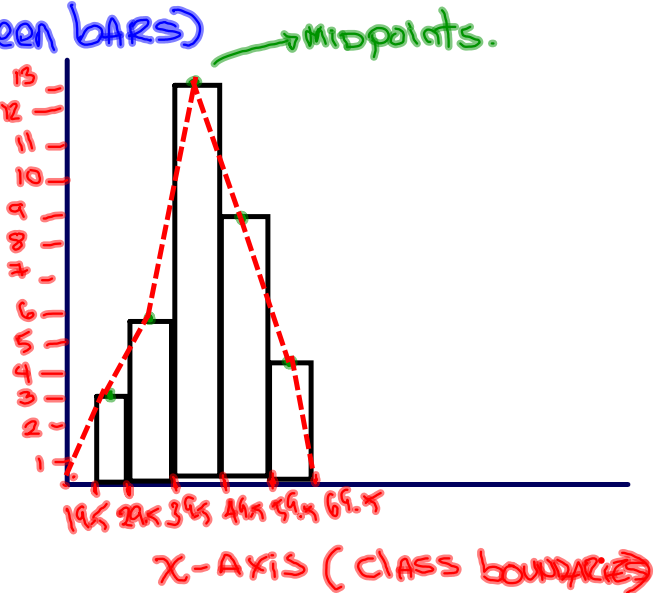
1) Histogram (NO SPACES BETWEEN BARS)

• USE THE CLASS BOUNDARIES

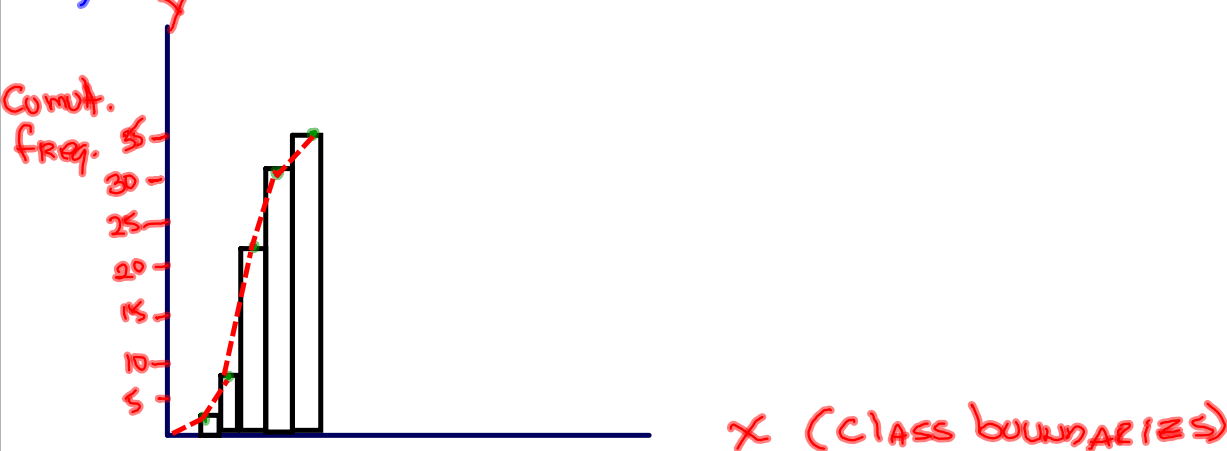
Frequency (Y AXIS)

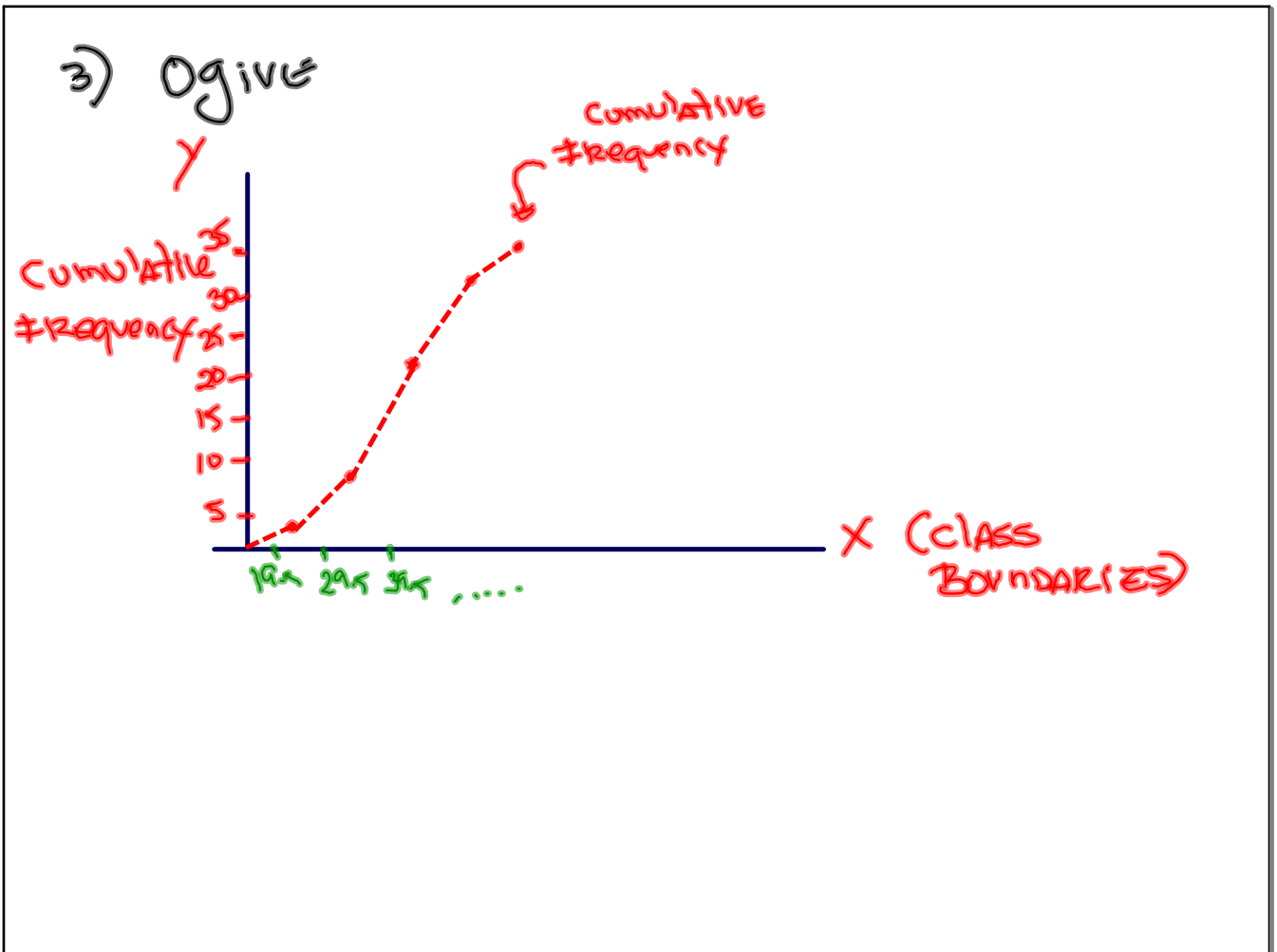
2) Frequency polygon

- connect the midpoints
- first midpoint is extended to zero
- last midpt. is extended last class boundary



2.1) Cumulative frequency Histogram





A) Discrete or Continuous (Numerical DATA)
ex How many? ex How much?