

Group 4:

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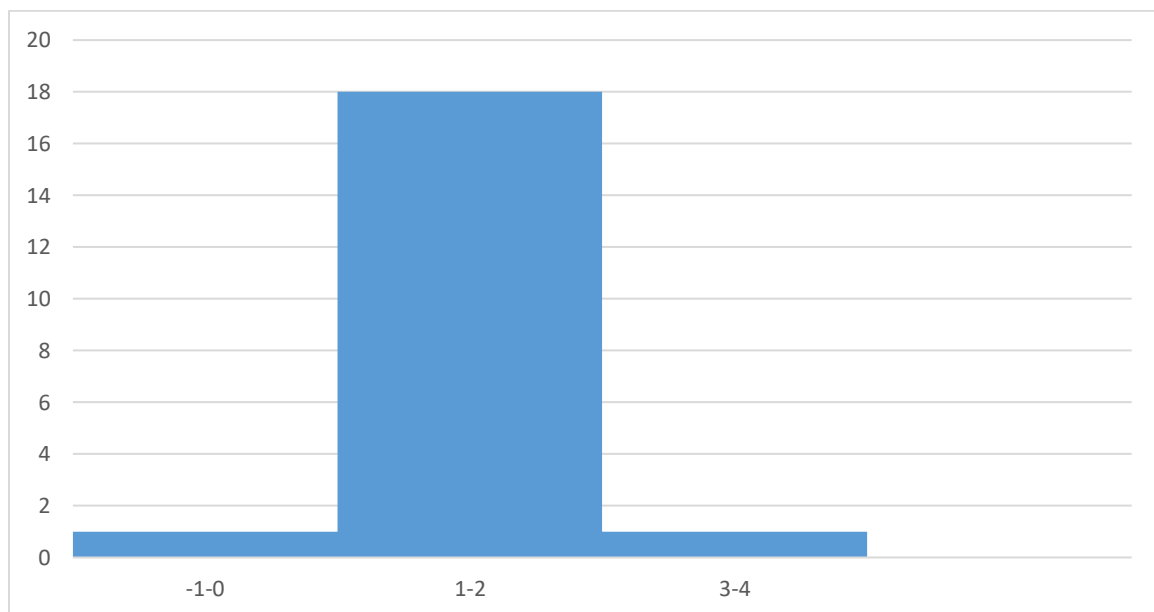
Activity 3 Sampling Distribution

Data: 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3

1. Class Interval

-1 - 0	1
1 - 2	18
3 - 4	1

2. Histogram



3. Pearson Coefficient of Skewness

X	(x - \bar{x})	(x - \bar{x}) ²
0	-1.45	2.1025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
1	-0.45	0.2025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
2	0.55	0.3025
3	1.55	2.4025

$$\sum (x - \bar{x})^2 = 8.95$$

$$s = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

$$s = \sqrt{\frac{8.95}{19}}$$

$$s = 0.6863$$

$$\text{median} = 1$$

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

$$\bar{x} = \frac{29}{20}$$

$$\bar{x} = 1.45$$

$$PC = \frac{3(\bar{x} - \text{median})}{s}$$

$$PC = \frac{3[(1.45) - (1)]}{0.6863}$$

$$PC = \frac{1.35}{0.6863}$$

$$PC = 1.9671$$

4. Upper and Lower Limits

mode - 1
 mean 1.45
 median - 1
 Q1 - 1
 Q3 - 2
 IQR - 1

Lower limit -
 $Q1 - 1.5 * IQR$
 $1 - 1.5 * 1 = \boxed{-0.5}$

Upper limit -
 $Q3 + 1.5 * IQR =$
 $2 + 1.5 * 1 = \boxed{3.5}$

Remarks : Passed

* There are no potential outliers.

Remarks:

- Histogram: **PASSED**
- Pearson Coefficient of Skewness: **PASSED**
- Upper and Lower Limits: **PASSED**