5 Number Summary

1) Minimum ✓

2) 1st Quartile (25%)

3) Median

4) 3rd Quartile (75%)

5) Maximum

Eg: 1, 2, 2, 2, 3, 3, 4, 5, 5, 5, 6, 6, 6, 6, 7, 8, 8, 9, ~~27~~ ↗ outlier

$[$ lower fence ⟷ Higher fence $]$

lower fence $= Q1 - 1.5(IQR)$

Higher fence $= Q3 + 1.5(IQR)$

(25%)

$$Q1 = \frac{Percentile}{100} \times (n+1) = \frac{25}{100} \times (20) = 5^{th} \text{ position} = 3 \checkmark$$

(75%)

$$Q3 = \frac{75}{100} \times (20) = 15^{th} \text{ position} = 7 \checkmark$$

$$IQR = Q3 - Q1 = 7 - 3 = 4 \checkmark$$

outlier

$[-3 \longleftrightarrow 13]$

lower fence $= Q1 - 1.5(IQR)$

$$= 3 - 1.5(4)$$

$$= 3 - 6 = \boxed{-3}$$

Higher fence $= Q3 + 1.5(IQR)$

$$= 7 + 1.5(4)$$

$$= 13 //$$

Eg: 1, 2, 2, 2, 3, 3, 4, 5, 5, 5, 6, 6, 6, 6, 7, 8, 8, 9, ~~27~~

Box plot ✓

Minimum = 1

1st Quartile = 3

Median = 5

3rd Quartile = 7

Maximum = 9