

# BOX PLOT AND FIVE-NUMBER SUMMARY MAT

## 1 FIVE-NUMBER SUMMARY

The five-number summary describes the spread of a data set.

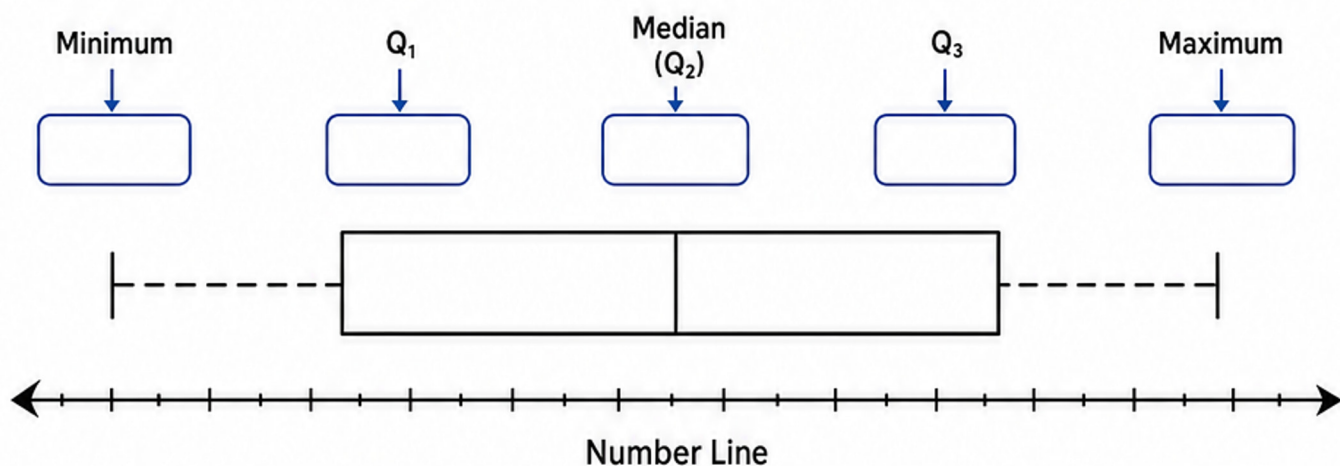
Minimum (min)	
Lower Quartile ( $Q_1$ )	
Median ( $Q_2$ )	
Upper Quartile ( $Q_3$ )	
Maximum (max)	

## 2 ORDERED DATA

Write the data in order from smallest to largest.

## 3 BOX PLOT

Use the five-number summary to draw the box plot on the number line.



## 4 USEFUL CHECKS

- Data are in order.
- $\text{min} \leq Q_1 \leq \text{median} \leq Q_3 \leq \text{max}$
- The median splits the data in half.
- $Q_1$  and  $Q_3$  split the middle 50% of the data.
- Whiskers show the smallest and largest values.

## 5 NOTES / WORKING SPACE

### QUARTILE REMINDER

$Q_1$  (Lower Quartile):  
Median of the lower half of the data.



$Q_2$  (Median):  
Middle value of the data.



$Q_3$  (Upper Quartile):  
Median of the upper half of the data.

