1. **Solution**
The sample size, $n$, is 45. We determine the indeces and values of Q1, Q2, and Q3.

| Quartile | Formula for $i$ | $i$ | $x$ |
|---|---|---|---|
| Q1 | $\lceil 0.25 \times 45 \rceil$ | 12 | 16.6 |
| Q2 | $\lceil 0.5 \times 45 \rceil$ | 23 | 18.08 |
| Q3 | $\lceil 0.75 \times 45 \rceil$ | 34 | 19.16 |

We determine the IQR.

$$\begin{aligned} \text{IQR} &= \text{Q3} - \text{Q1} \\ &= 19.16 - 16.6 \\ &= 2.56 \end{aligned}$$

We determine the outlier boundaries.

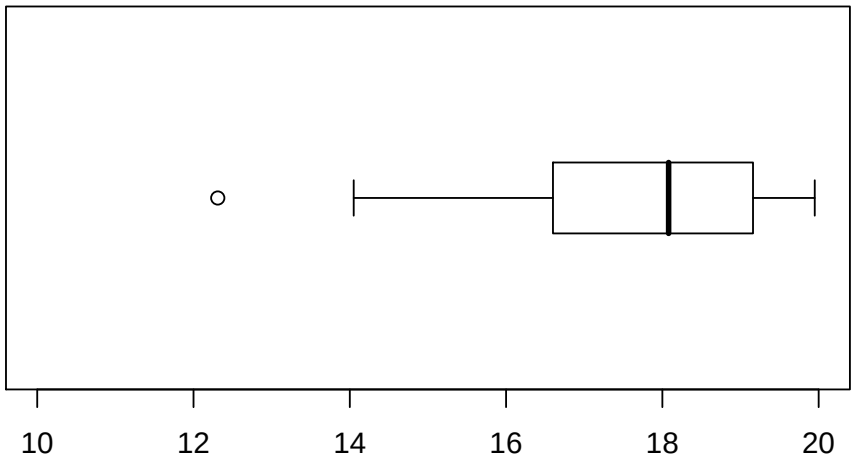
$$\begin{aligned} \text{lower boundary} &= \text{Q1} - 1.5 \times \text{IQR} \\ &= 16.6 - 1.5 \times 2.56 \\ &= 12.76 \end{aligned}$$

$$\begin{aligned} \text{upper boundary} &= \text{Q3} + 1.5 \times \text{IQR} \\ &= 19.16 + 1.5 \times 2.56 \\ &= 23 \end{aligned}$$

We determine the outliers.

$$\text{outliers} = \{12.31\}$$

We identify the ends of the whiskers: 14.05 and 19.95. We plot the boxplot.



2. **Solution**
The sample size, $n$, is 42. We determine the indeces and values of Q1, Q2, and Q3.

| Quartile | Formula for $i$ | $i$ | $x$ |
|---|---|---|---|
| Q1 | $\lceil 0.25 \times 42 \rceil$ | 11 | 40.17 |
| Q2 | $\lceil 0.5 \times 42 \rceil$ | 21 | 40.4 |
| Q3 | $\lceil 0.75 \times 42 \rceil$ | 32 | 40.95 |

We determine the IQR.

$$\begin{aligned} \text{IQR} &= \text{Q3} - \text{Q1} \\ &= 40.95 - 40.17 \\ &= 0.78 \end{aligned}$$

We determine the outlier boundaries.

$$\begin{aligned} \text{lower boundary} &= \text{Q1} - 1.5 \times \text{IQR} \\ &= 40.17 - 1.5 \times 0.78 \\ &= 39 \end{aligned}$$

$$\begin{aligned} \text{upper boundary} &= \text{Q3} + 1.5 \times \text{IQR} \\ &= 40.95 + 1.5 \times 0.78 \\ &= 42.12 \end{aligned}$$

We determine the outliers.

$$\text{outliers} = \{42.15, 42.46\}$$

We identify the ends of the whiskers: 40 and 41.84. We plot the boxplot.