

DATA DISPLAYS

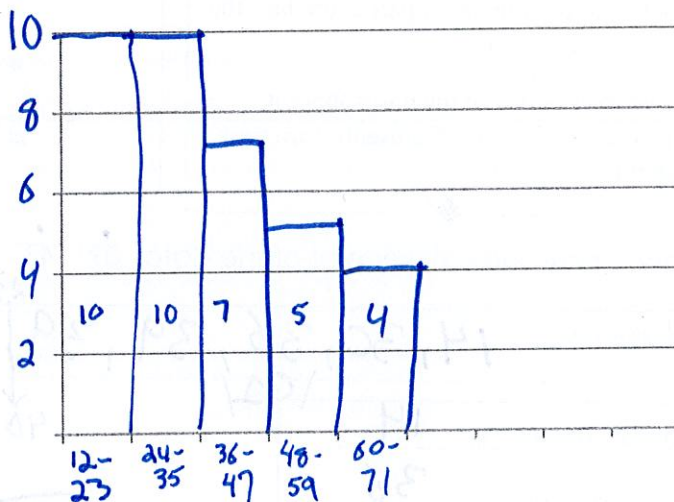
Line Plot (dot plot): a visual display of a distribution of data values where each data value is shown as a dot or other mark, usually an X, above a number line.

Histogram: a type of bar graph used to display numerical data that have been organized into equal intervals; the bars touch; all bars have the same width

Outlier: a data value that is either much greater or much less than the median

Draw a histogram to represent the set of data. Include a title and label the axes.

Lengths of Snakes		
Length (in.)	Tally	Frequency
12-23		10
24-35		10
36-47		7
48-59		5
60-71		4



How many snakes are at least 36 inches long?

$7 + 5 + 4 = 16$ snakes

How many more snakes are 12 - 35 inches long than 60 - 71 inches long?

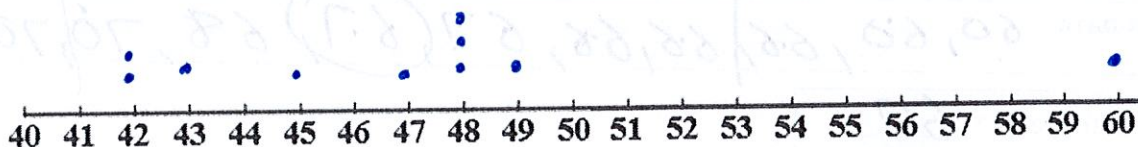
$(10 + 10) - (4) = 16$ snakes

Make a line plot for the set of data. Find the median, mode, range, and any outliers of the data.

Student Height (in inches) for Mrs. Foster's 5th Grade Class

48 42 48 43 47 60 45 48 49 42

Student Height (in inches)



MEDIAN 47.5 in	MODE 48 in
RANGE $60 - 42 = 18$ in	OUTLIER? Yes - 60 in

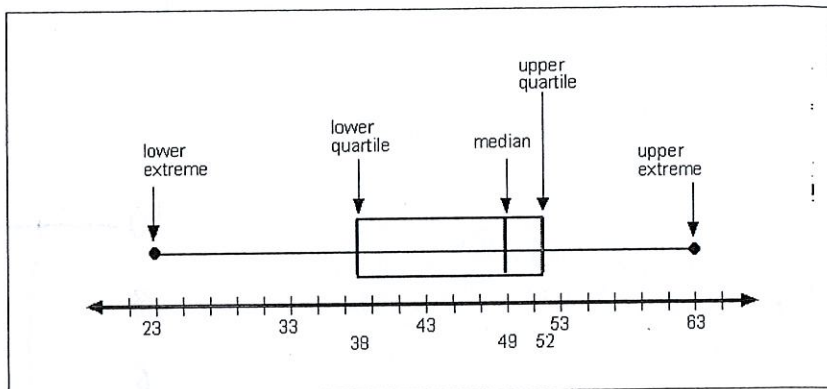
A **box-and-whisker plot** uses the least and greatest data values along with three special midpoints to represent how the data is spread out.

Interquartile range (IQR): distance between the lower quartile and the upper quartile; subtract the lower quartile from the upper quartile ($IQR = Q_3 - Q_1$)

Each whisker and each part of the box represents 25% of the data values – REGARDLESS OF THE SIZE OF THE WHISKERS AND SECTIONS OF THE BOX.

The longer the whisker or part of the box, the more spread out the values are.

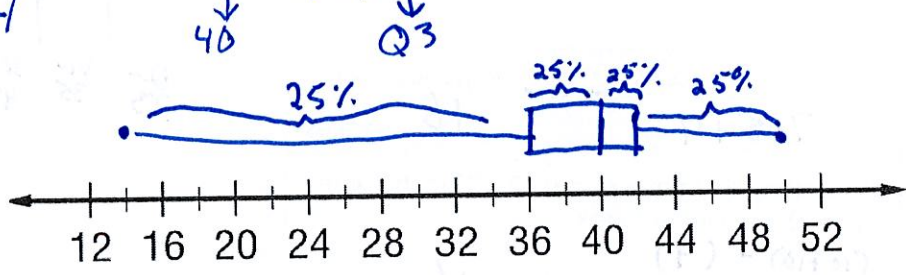
If a whisker or part of the box is short, it means the data values represented are close together.



Draw a box-and-whisker plot of the data. $\overset{\cdot}{39}$ $\overset{\cdot}{41}$ $\overset{\cdot}{30}$ $\overset{\cdot}{14}$ $\overset{\cdot}{44}$ $\overset{\cdot}{41}$ $\overset{\cdot}{50}$ $\overset{\cdot}{39}$ $\overset{\cdot}{42}$ $\overset{\cdot}{36}$

ORDER DATA: 14, 30, 36, 39, 39 | 41, 41, 42, 44, 50

Lower Extreme Q_0 : 14
 Lower Quartile Q_1 : 36
 Middle Quartile Q_2 : 40
 Upper Quartile Q_3 : 42
 Upper Extreme Q_4 : 50
 Interquartile range (IQR):
 $42 - 36 = 6$

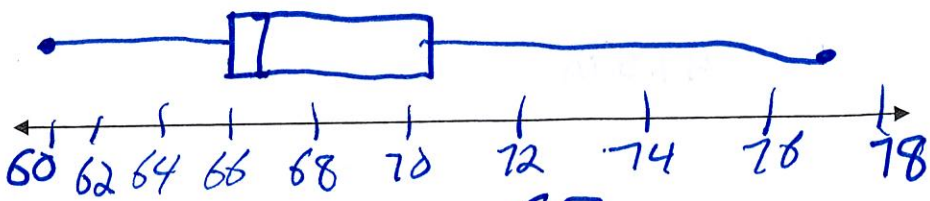


1. What is the median of the data? 40
2. What percent of the data is greater than 36? 75%

Listed below are the heights of boys on an 8th grade basketball team. Draw a box-and-whisker plot of the data. Include a title. $\overset{\cdot}{60}$ $\overset{\cdot}{66}$ $\overset{\cdot}{70}$ $\overset{\cdot}{72}$ $\overset{\cdot}{71}$ $\overset{\cdot}{68}$ $\overset{\cdot}{60}$ $\overset{\cdot}{67}$ $\overset{\cdot}{70}$ $\overset{\cdot}{77}$ $\overset{\cdot}{66}$ $\overset{\cdot}{66}$ $\overset{\cdot}{67}$

ORDER DATA: 60, 60, 66, 66, 66, 67, 67 | 68, 70, 70, 71, 72, 77

Lower Extreme Q_0 : 60
 Lower Quartile Q_1 : 66
 Middle Quartile Q_2 : 67
 Upper Quartile Q_3 : 70.5
 Upper Extreme Q_4 : 77
 Interquartile range (IQR):
 4.5



1. What is the median of the data? 67
2. What percent of the players are at least 67 inches tall? 50%