

b. {6, 11, 3, 18, 7, 5, 13, 9}

Step 1 List the data from least to greatest. Then find the median.

$$\begin{array}{cccccccc}
 3 & 5 & 6 & 7 & 9 & 11 & 13 & 18 \\
 & & & \uparrow & & & & \\
 & & & \text{median} = \frac{11+13}{2} & \text{or } 8 & & &
 \end{array}$$

Step 2 Find the upper and lower quartiles.

$$\begin{array}{cccccccc}
 \text{lower half} & & & & \text{upper half} & & & \\
 \underbrace{3 \quad 5 \quad 6 \quad 7} & & & & \underbrace{9 \quad 11 \quad 13 \quad 18} & & & \\
 & \uparrow & & \uparrow & & \uparrow & & \\
 & & & \text{median} = 8 & & & & \\
 \underbrace{LQ = \frac{5+6}{2} \text{ or } 5.5} & & & & \underbrace{UQ = \frac{11+13}{2} \text{ or } 12} & & &
 \end{array}$$

The interquartile range is $12 - 5.5$ or 6.5 .

Example 3 Interpret and Compare Data

MARRIAGE The ages at which men and women first get married are listed in the stem-and-leaf plot.

Men		Women
9	1	8 8 9
8 6 3 3 2	2	0 1 1 3 5 9
9 7 6 5 5 4 0	3	2 4 7
6 2	4	1
1	5	3 6
4	6	
$0 3 = 30 \text{ years}$		$2 3 = 23 \text{ years}$

a. **What is the median age for each group?**

The median age for the men is 35.

The median age for the women is 25.

b. **Compare the range for the men and the women.**

The range for the men is $64 - 19$ or 45 years and the range for the women is $56 - 18$ or 38 years. So, the ages vary more for the men than the women.