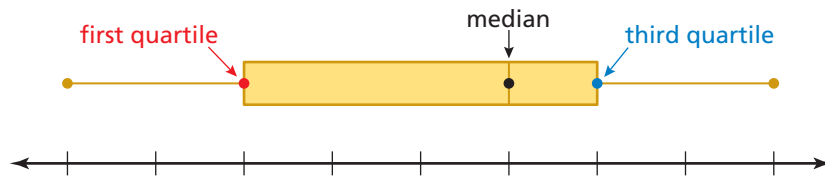


REVIEW: Identifying Outliers

Name _____

Key Concept and Vocabulary



Half of the data values lie in the box.



interquartile range (IQR) = third quartile - first quartile

An outlier is any data value that is:

- less than first quartile - $1.5 \times \text{IQR}$
- greater than third quartile + $1.5 \times \text{IQR}$

Skill Example

- | | |
|--------------------|--------------------|
| lower half | upper half |
| 10 21 21 23 | 25 26 28 42 |
| ↑ | ↑ |
| first quartile, 21 | third quartile, 27 |

$\text{IQR} = 27 - 21 = 6$
 $21 - 1.5 \times 6 = 12$ $27 + 1.5 \times 6 = 36$
 Because $10 < 12$, 10 is an outlier. Because $42 > 36$, 42 is an outlier.

Application Example

- The table shows the heights of seven students. Identify any outlier(s).

Height (in inches)						
52	47	55	81	61	49	59

Order the data: 47, 49, 52, 55, 59, 61, 81

$\text{IQR} = 61 - 49 = 12$
 $49 - 1.5 \times 12 = 31$ $61 + 1.5 \times 12 = 79$

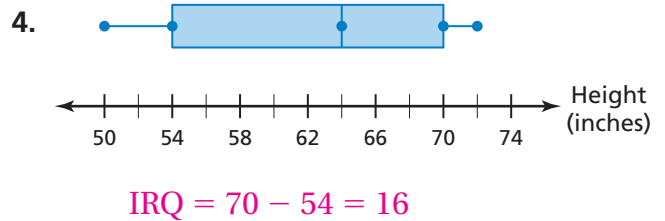
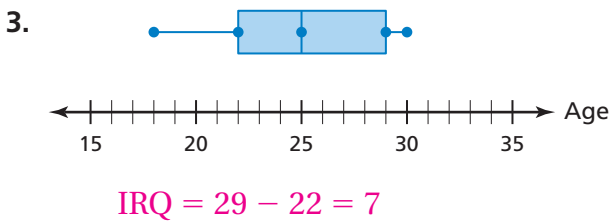
- Because $81 > 79$, 81 is an outlier. There are no data values less than 31.

PRACTICE MAKES PURR-FECT™



Check your answers at BigIdeasMath.com.

Find the interquartile range.



Identify any outlier(s) of the data set.

- 8, 10, 13, 13, 14, 16, 27 27
- 20, 22, 22, 25, 28, 32, 34, 43 none
- 44, 51, 36, 19, 40, 69, 49, 46 19, 69
- 76, 72, 64, 93, 80, 78, 96, 75, 70, 72 93, 96

- BASKETBALL** The table shows the free throw percentage of each player on a basketball team. Identify any outlier(s). 51, 54

Free Throw Percentage			
75	72	54	69
82	51	74	76
79	85	75	84