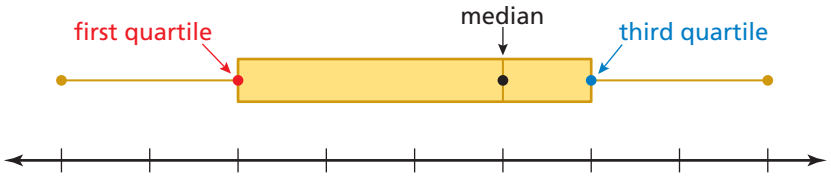
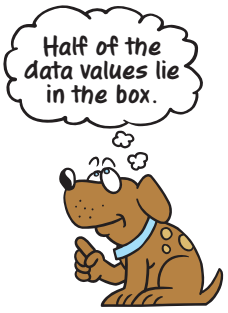
REVIEW: Identifying Outliers

Name _____

Key Concept and Vocabulary





interquartile range (IQR) = third quartile − first quartile

An outlier is any data value that is:

- less than first quartile − 1.5 × IQR
- greater than third quartile + 1.5 × IQR

Skill Example

1. lower half: 10 21 21 23 | upper half: 25 26 28 42

first quartile, 21 | third quartile, 27

IQR = 27 − 21 = 6

21 − 1.5 × 6 = 12

Because 10 < 12, 10 is an outlier.

27 + 1.5 × 6 = 36

Because 42 > 36, 42 is an outlier.

Application Example

2. 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

IQR = 61 − 49 = 12

49 − 1.5 × 12 = 31

61 + 1.5 × 12 = 79

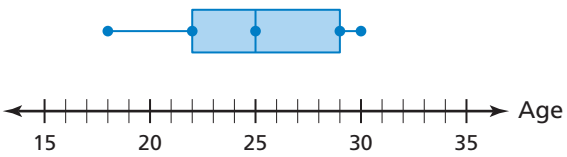
Because 81 > 79, 81 is an outlier. There are no data values less than 31.

PRACTICE MAKES *PURR*-FECT™

Check your answers at BigIdeasMath.com.

Find the interquartile range.

3.



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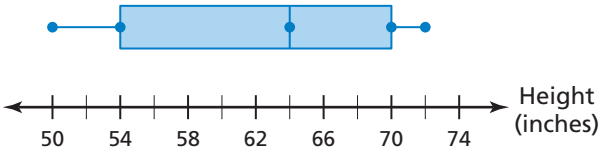
4.



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Identify any outlier(s) of the data set.

5. 8, 10, 13, 13, 14, 16, 27 _____

6. 20, 22, 22, 25, 28, 32, 34, 43 _____

7. 44, 51, 36, 19, 40, 69, 49, 46 _____

8. 76, 72, 64, 93, 80, 78, 96, 75, 70, 72 _____

9. **BASKETBALL** The table shows the free throw percentage of each player on a basketball team. Identify any outlier(s). _____

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