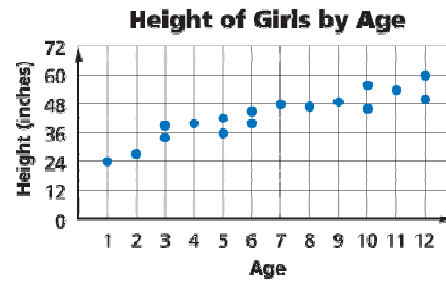


## Lesson 1-7

## Example 1

**HEALTH** The scatter plot displays the heights of a group of girls of various ages.

- How many girls are represented?
- About how tall was the 11-year-old girl?
- How much taller was the tallest girl than the shortest girl?
- Which range of heights includes the most girls: 2–3 feet, 3–4 feet, or 4–5 feet?



## Solution

- Seventeen girls are represented.
- The 11-year-old girl was about 54 inches or 4 feet 6 inches tall.
- The shortest girl was 24 inches or 2 feet tall, and the tallest girl was 60 inches or 5 feet tall, so the tallest girl was 36 inches or 3 feet taller than the shortest girl.
- There are the most girls in the height range of 3–4 feet.

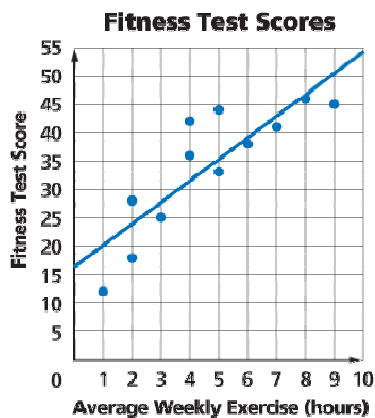
**Example 2**

**FITNESS** The table shows the results of a survey showing the average amount of time twelve teenagers exercised per week and their scores on a fitness test on which the maximum possible score is 60.

- Draw a scatter plot and estimate a line of best fit.
- Is there a positive or negative correlation between the amount of time spent exercising and scores on the fitness test?
- Based on this data, about what score would you expect a teenager who exercises 10 hours a week to score on the fitness test?
- Based on this data, about how many hours a week would you expect a teenager who gets a fitness test score of 40 to exercise?

**Fitness Test Scores**

Hours of Weekly Exercise	Score
2	28
5	33
7	41
1	12
3	25
2	18
4	42
8	46
4	36
5	44
6	38
9	45

**Solution**

- Your line of best fit may differ because of estimation.
- The correlation is positive because fitness test score increases as the number of hours of exercise increases. The line of best fit slopes up and to the right.
- A teenager who exercises 10 hours per week might score about 55.
- A teenager who gets a score of 40 might exercise about 6 hours a week.