Interpreting Distance Graphs

Ann went for a walk on Saturday. When the timing started, she was already traveling at the given rate. She walked in a straight line away from home then she returned back along the same path. On her way home, she stopped for lunch. The graph shows her distance from home at any given time during the walk. Complete the table, and then use the graph and table to answer the following questions.

1. At what time is Ann’s distance from home 0 miles? Give a reason that supports your answer.

2. What is Ann’s maximum distance from home? At what time did she turn around to return home? Give reasons that supports your answers.

3. When did Ann stop for lunch? How far from home was she when she stopped for lunch? How long did she stop for lunch? Give reasons that support your answers.

4. How many hours was Ann’s trip? Give a reason that supports your answer.
5. When did Ann walk the fastest? What was her speed in miles per hour? Give reasons that support your answers.

6. When was Ann walking the slowest? What was her speed in miles per hour? Give reasons that support your answers.

7. What was Ann’s distance from home at 6 hours? Give a reason that supports your answer.

8. At what times was Ann’s distance from home 4 miles? (Hint: use similar triangles to determine the second time.)

9. During what times was Ann’s distance from home increasing? Give a reason that supports your answer.

10. During what times was Ann’s distance from home decreasing? Give a reason that supports your answer.

11. When was Ann walking the same rate away from home and toward home? Give a reason that supports your answer.
Practice with Scatter Plots

Classify the scatter plots as having a positive, negative, or no correlation.

1.  
2.  
3.  

4.  
5.  
6.  

7. A history teacher asked her students how many hours of sleep they had the night before a test. The data below shows the number of hours the student slept and their score on the exam. Plot the data on a scatter plot.

<table>
<thead>
<tr>
<th>Hours Slept</th>
<th>8</th>
<th>7</th>
<th>7</th>
<th>8</th>
<th>6</th>
<th>5</th>
<th>7</th>
<th>4</th>
<th>9</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Score</td>
<td>83</td>
<td>86</td>
<td>74</td>
<td>88</td>
<td>76</td>
<td>63</td>
<td>90</td>
<td>60</td>
<td>89</td>
<td>81</td>
</tr>
</tbody>
</table>

![Scatter Plot Diagram]
8. Assume that during a three-hour period spent outside, a person recorded the temperature and their water consumption. The experiment was conducted on 7 randomly selected days during the summer. The data is shown in the table below.

<table>
<thead>
<tr>
<th>Day</th>
<th>Temperature (F)</th>
<th>Water Consumption (oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>99</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>85</td>
<td>27</td>
</tr>
<tr>
<td>3</td>
<td>97</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>75</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>92</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>85</td>
<td>25</td>
</tr>
<tr>
<td>7</td>
<td>83</td>
<td>20</td>
</tr>
</tbody>
</table>

Create a scatter plot with the data. What is the correlation of this scatter plot? (Hint: Do not use the day on the scatter plot.)

Identify the data sets as having a positive, a negative, or no correlation.

8. The number of hours a person has driven and the number of miles driven

9. The number of siblings a student has and the grade they have in math class

10. The age of a car and the value of the car

11. The number of weeks a CD has been out and the total sales

12. The number of years a person went to school and their income

13. The number of songs downloaded on your i-pod and the amount of memory available

14. The amount of time spent on the computer instant messaging your friends and the number of computers in your house

15. The age of a house and the number of people living in the house