**Lesson 1 Skills Practice**

***Scatter Plots***

**Explain whether the scatter plot of the data for each of the following shows a *positive*, *negative*, or *no* association. Interpret the scatter plot.**

 **1. 2.**





 **3. 4.**





 **5. E-MAIL** Construct a scatter plot of the number of E-mails Vincent received over the past six days. Interpret the scatter plot.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Day** | 1 | 2 | 3 | 4 | 5 | 6 |
| **E-mails** | 16 | 21 | 3 | 11 | 19 | 5 |

**Lesson 1 Homework Practice**

***Scatter Plots***

**Interpret each scatter plot.**

 **1. 2. 3.**







 **4. RIVER** Construct a scatter plot of the river’s width and the water’s speed.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **River Width (m)** | 15 | 18 | 20 | 28 | 30 | 32 | 38 | 40 | 42 | 45 |
| **Water Speed (km/h)** | 12.6 | 10.7 | 11.2 | 9.7 | 8.1 | 8.7 | 6.9 | 5.4 | 3.9 | 4.1 |

 **5. DONATIONS** Construct a scatter plot of the number of cars donated to a local charity over the past five years since 2007.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Years Since 2007** | 1 | 2 | 3 | 4 | 5 |
| **Number of Cars** | 14 | 21 | 30 | 28 | 35 |

**Lesson 1 Problem-Solving Practice**

***Scatter Plots***

**WAGES For Exercises 1 and 2, use the BRICKS For Exercises 3 and 4, use the**

**table below. table below.**

|  |  |
| --- | --- |
| **Time****(minutes)** | **Bricks Remaining** |
| 0 | 600 |
| 10 | 565 |
| 20 | 530 |
| 30 | 495 |
| 40 | 460 |
| 50 | 425 |

|  |  |
| --- | --- |
| **Years Since 2002** | **Average****Hourly Wage** |
| 1 | $12.25 |
| 2 | $12.75 |
| 3 | $13.50 |
| 4 | $14.00 |
| 5 | $14.75 |
| 6 | $15.25 |

|  |  |
| --- | --- |
| **1.** Construct a scatter plot of the data. | **3.** Construct a scatter plot of the data. |
| **2.****a.** Does the scatter plot show a *positive*, *negative*, or *no* association? Explain.**b.** If an association exists, make a conjecture about the hourly wages in 2009. | **4.****a.** Does the scatter plot show a *positive*, *negative*, or *no* association? Explain.**b.** If an association exists, make a conjecture about the number of bricks remaining to be loaded after 1 hour and 10 minutes has passed. |

**Lesson 1 Extra Practice**

***Scatter Plots***

 **1.** The number of pieces in a jigsaw puzzle and the number of minutes required for a person to complete it is shown below.

 

 **a.** Make a scatter plot of the data.

 **b.** Interpret the scatter plot of the data based on the shape of the distribution. **Sample answer: the scatter plot shows a positive linear association. There are no clusters or outliers.**

 **c.** Suppose Dave purchases a puzzle having 650 pieces. Predict the length of time it will take him to complete the puzzle. **Sample answer: 260 min**

 **2.** The table shows the number of gold medals won by the United States Olympic team at the Summer Olympics from 1968 through 2008.

 

 **a.** Make a scatter plot of the data.

 **b.** Interpret the scatter plot of the data based on the shape of the distribution. **Sample answer: The scatter plot shows a linear association. There are no clusters and one outlier.**

 **c.** Is it possible to predict the number of gold medals won in 2016? Explain. **Sample answer: There is not a positive or negative relationship, but the number of medals is around 40 each year. You could reasonable predict that the number of gold medals in 2016 would be around 40.**