Pass the Problem – Scatterplots (A.2D)

Roma had guests for dinner at her house eight times and has recorded the number of guests and the total cost for each meal in the table.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Guests** | 3 | 4 | 4 | 6 | 6 | 7 | 8 | 8 |
| **Cost ($)** | 30 | 65 | 88 | 90 | 115 | 160 | 150 | 162 |

|  |  |
| --- | --- |
| Step 1  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to create a scatter plot of the data  Sketch below. Label your axes  [image] |
| Step 2  Name: \_\_\_\_\_\_\_\_\_\_\_ | Describe the correlation of the data. |
| Step 3  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to find a linear model for the data. |
| Step 4  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the cost of dinner for 11 guests. |
| Step 5  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the number of guests Roma could serve  for $200. |

Pass the Problem – Scatterplots (A.2D)

The table below shoes the dosage of a particular medicine as related to a person’s weight.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Weight (lb)** | 90 | 100 | 110 | 125 | 140 | 155 | 170 | 180 | 200 |
| **Dosage (mg)** | 20 | 25 | 30 | 35 | 40 | 53 | 60 | 66 | 75 |

|  |  |
| --- | --- |
| Step 1  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to create a scatter plot of the data  Sketch below. Label your axes  [image] |
| Step 2  Name: \_\_\_\_\_\_\_\_\_\_\_ | Describe the correlation of the data. |
| Step 3  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to find a linear model for the data. |
| Step 4  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the dosage for a person weighing 240 pounds. |
| Step 5  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the weight of a person prescribed a dosage of 50 mg. |

Pass the Problem – Scatterplots (A.2D)

On Penny’s 15th birthday, her grandmother gave her a large jar of quarters. Penny decided to continue to save quarters in the jar. Every few months she counts her quarters and records the results.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of months since her 15th birthday** | 3 | 5 | 8 | 12 | 15 | 19 | 22 | 26 |
| **Number of quarters** | 270 | 275 | 376 | 420 | 602 | 684 | 800 | 830 |

|  |  |
| --- | --- |
| Step 1  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to create a scatter plot of the data  Sketch below. Label your axes  [image] |
| Step 2  Name: \_\_\_\_\_\_\_\_\_\_\_ | Describe the correlation of the data. |
| Step 3  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to find a linear model for the data. |
| Step 4  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the number of quarters Penny will have on her 18th birthday. |
| Step 5  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict when Penny will have 1000 quarters. |

Pass the Problem – Scatterplots (A.2D)

Anthropologists use known relationships between the height and length of a woman’s humerus bone, the bone between the elbow and the shoulder, to estimate a woman’s height.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Humerus Length (cm)** | 35 | 27 | 30 | 33 | 25 | 39 | 27 | 31 |
| **Height (cm)** | 167 | 146 | 154 | 165 | 140 | 180 | 149 | 155 |

|  |  |
| --- | --- |
| Step 1  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to create a scatter plot of the data  Sketch below. Label your axes  [image] |
| Step 2  Name: \_\_\_\_\_\_\_\_\_\_\_ | Describe the correlation of the data. |
| Step 3  Name: \_\_\_\_\_\_\_\_\_\_\_ | Use your calculator to find a linear model for the data. |
| Step 4  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the height of a women with a humerus length of 32 cm. |
| Step 5  Name: \_\_\_\_\_\_\_\_\_\_\_ | Based on the model, predict the humerus length of a 185 cm woman. |