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Line of Best Fit Worksheet
Create a scatter plot for each data set. Calculate a line of best fit for the data.

1. $(1,2),(3,4),(5,6),(6,6),(7,8),(8,9)$

2. 

| $\boldsymbol{x}$ | $\boldsymbol{y}$ |
| :---: | :---: |
| -7 | 5 |
| -4 | 3 |
| -3 | 2 |
| 0 | -2 |
| 4 | -4 |
| 6 | -7 |


3. The table shows the temperature for various elevations based on a temperature of $59^{\circ} \mathrm{F}$ at sea level.

Draw a scatter plot of the data and describe the correlation shown.

| Elevation (ft) | 1000 | 5000 | 10,000 | 15,000 | 20,000 | 30,000 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Temperature $\left({ }^{\circ} \mathrm{F}\right)$ | 56 | 41 | 23 | 5 | -15 | -47 |


a. Use the line of best fit to estimate the temperate at an elevation of 12,000 feet.
b. Use the line of best fit to estimate the elevation if the temperature is 10 degrees.
4. The chart below shows the study time for students and how that affects their test scores.

## Course 1

| Mean Study Time <br> (hours) | Mean Test Score |
| :---: | :---: |
| 0.5 | 65 |
| 1.0 | 71 |
| 1.5 | 75 |
| 2.0 | 82 |
| 2.5 | 84 |
| 3.0 | 90 |
| 3.5 | 95 |


5. The table below shows the relationship between the number of students going on a field trip and the number of teachers accompanying them.

## Field Trips

| Students | 28 | 38 | 45 | 48 | 57 | 65 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teachersiv | 2 | 3 | 3 | 4 | 4 | 5 |


6. The table shows the average and maximum longevity of various animals in captivity.

| Longevity (years) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Avg. | 12 | 25 | 15 | 8 | 35 | 40 | 41 | 20 |
| Max. | 47 | 50 | 40 | 20 | 70 | 77 | 61 | 54 |



