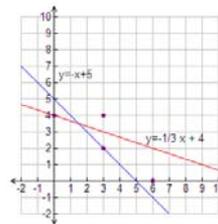


**LESSON**  
**4-8**

**Practice A**  
**Line of Best Fit**

1. The data in the table are graphed at the right along with two lines of fit.

<b>x</b>	0	3	3	6
<b>y</b>	4	2	4	0



- Find the sum of the squares of the residuals for  $y = -x + 5$ . \_\_\_\_\_
- Find the sum of the squares of the residuals for  $y = -\frac{1}{3}x + 4$ . \_\_\_\_\_
- Which line is a better fit for the data? \_\_\_\_\_

2. Use the data in the table to answer the questions that follow.

<b>x</b>	2	4	5	7	10
<b>y</b>	4.3	4.8	5.1	5.75	6.4

- Find an equation for a line of best fit. \_\_\_\_\_
- What is the correlation coefficient? \_\_\_\_\_
- How well does the line represent the data? \_\_\_\_\_
- Describe the correlation. \_\_\_\_\_

3. Use the data in the table to answer the questions that follow.

<b>x</b>	10	8	6	4	2
<b>y</b>	3	3.2	3.5	3.8	4

- Find an equation for a line of best fit. \_\_\_\_\_
- What is the correlation coefficient? \_\_\_\_\_
- How well does the line represent the data? \_\_\_\_\_
- Describe the correlation. \_\_\_\_\_

4. The table shows the average number of hours of sleep per night that four students had during the week versus their grades on a test. The equation of the line of best fit is  $y \approx 4.04x + 52.70$ , and  $r \approx 0.97$ . Discuss correlation and causation for the data set.

Hours Slept	6	6.5	7.2	8.1
Test Score	76	80	82	85

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