Time Frame: 50 minutes

Subject Matter: Line of Best Fit TELL ME

Objective: TSWBAT carry out the procedure using the TI 83 calculator to find a line of best fit for a scatter plot

Standards: DA – 3.8

Materials: TI 83 Calculator, Ruler, Graphing papers, and Worksheets

SHOW ME

Presentation of Information

The teacher will let the students draw a scatter, manually, for example 1.

Then the teacher will discuss how to draw a scatter plot in the calculator and how to find the equation of the line of best fit for a given data.

Example 1: Find the equation of the line of best fit for the data obtained in a study on the number of absences and the final grades of seven randomly selected students from a statistics class. The data are shown here.

|  |  |  |
| --- | --- | --- |
| Student | Number of Absences (x) | Final Grade (y) |
| A | 6 | 82 |
| B | 2 | 86 |
| C | 15 | 43 |
| D | 9 | 74 |
| E | 12 | 58 |
| F | 5 | 90 |
| G | 8 | 78 |

Questions:

1. What would be the grade of a student who missed 20 days? Present all the time?
2. Estimate the number of days that a student missed if his/her grade is
   1. 70
   2. 50
   3. 99

Classwork

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: April 1, 2011

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3. A researcher wishes to determine if a person’s age is related to the number of hours he or she spent surfing the net per week. The data of the sample is shown here.

Determine the number of hours spent by a

1. 32 year old
2. 25 year old

|  |  |
| --- | --- |
| Age (x) | Hours (y) |
| 18 | 30 |
| 26 | 27 |
| 32 | 24 |
| 38 | 23 |
| 52 | 8 |
| 59 | 5 |

1. The data obtained is a study on the number of hours that nine people exercise each week and the amount of milk (in ounces) each person consumes per week.

|  |  |  |
| --- | --- | --- |
| Subject | Hours (x) | Amount (y)  Determine the amount of milk consumed if a person exercises   1. 7 hours 2. 11 hours   Estimate the number of hours that a person exercises if he/she consumes   1. 50 ounces of milk 2. 35 ounces of milk |
| A | 3 | 48 |
| B | 0 | 8 |
| C | 2 | 32 |
| D | 5 | 64 |
| E | 8 | 10 |
| F | 5 | 32 |
| G | 10 | 56 |
| H | 2 | 72 |
| I | 1 | 48 |

1. An insurance company wants to determine the strength of the relationship between the number of hours a person works per week and the number of injuries or accidents that person has over a period of one week. The data are shown.

Determine the number of injuries/accidents that a person has if he/she worked

1. 48 hours
2. 55 hours

|  |  |
| --- | --- |
| Hours worked (x) | No. of accidents (y) |
| 40 | 1 |
| 32 | 0 |
| 36 | 3 |
| 44 | 41 |