Time Frame: 50 minutes

Subject Matter: Standard Error of the Estimate TELL ME

Objective: TSWBAT compute the standard error of the estimate.

Standards: DA – 3.8

 Materials: TI 83 Calculator and Worksheets

SHOW ME

Presentation of Information

The teacher will discuss the meaning of standard error of the estimate, denoted by *Sest* and its formula.

Formula: $S\_{est}=\sqrt{\frac{∑y^{2}-a∑xy-b∑y}{n-2}}$ The smaller the value of $S\_{est}$ the lesser the error of the estimate.

Classwork in standard error of the estimate

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: April 11, 2011

Compute the standard error of the estimate in each of the following.

1. Number of ads and sales.

|  |  |
| --- | --- |
| No. of Ads(x) | Sales (in thousands)(y) |
| 2 | 2 |
| 5 | 4 |
| 8 | 7 |
| 8 | 6 |
| 10 | 9 |
| 12 | 10 |

1. Ages and exercises

|  |  |
| --- | --- |
| Age(x) | Hours(y) |
| 18 | 10 |
| 26 | 5 |
| 32 | 2 |
| 38 | 3 |
| 52 | 1.5 |
| 59 | 1 |

1. Income and meals.

|  |  |
| --- | --- |
| Income in dollars(x)  | Meals(y) |
| $500 | 8 |
| $1200 | 12 |
| $1500 | 16 |
| $945 | 10 |
| $850 | 9 |
| $400 | 3 |
| $540 | 7 |

1. Temperature and number of emergency calls.

|  |  |
| --- | --- |
| Temperature(x) | No. of Calls(y) |
| 68 | 7 |
| 74 | 4 |
| 82 | 8 |
| 88 | 10 |
| 93 | 11 |
| 99 | 9 |
| 101 | 13 |