Unit 11, Day 2 Extra Practice


## Learning Targets

$>$ I can use my calculator to find a line of best fit from a table.
$>$ I can use my calculator to find a line of best fit from a scatter plot.

## 1. Find the equation for line or curve of best fit for the following data.

Ages and length of tails of tadpoles:

| Age <br> (\# of <br> days) | Length <br> of Tail <br> (meters) |
| :---: | :---: |
| 5 | 14 |
| 2 | 15 |
| 9 | 3 |
| 7 | 8 |
| 12 | 1 |
| 10 | 3 |
| 3 | 12 |

a. What is your equation? $\qquad$

Using your equation, estimate the tail length of an 8-day-old tadpole. (plug in $x=8$ )
b. Estimate the length when tadpole is 8 days old. $\qquad$
2. Find the equation for line or curve of best fit for the following data.

Height of a ball $\boldsymbol{x}$ seconds after being thrown in the air:

| $\boldsymbol{x}$ <br> (sec) | $\boldsymbol{y}$ <br> (meters) |
| :---: | :---: |
| 0 | 0 |
| 1 | 26.1 |
| 2 | 42.4 |
| 3 | 48.9 |
| 5 | 32.5 |
| 6 | 9.6 |

a. What is your equation? $\qquad$
b. Estimate what the height of the ball will be after 4 seconds.

Find the equation for line or curve of best fit for the following data.

Annual income, in thousands of dollars, and expenditures, in hundreds of dollars, for ten people:

| Income | 22 | 14 | 16 | 18 | 20 | 19 | 16 | 18 | 19 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Expenditures | 75 | 59 | 67 | 69 | 75 | 73 | 62 | 64 | 70 |

a. What is your equation? $\qquad$
b. Estimate the expenditures for someone who makes $\$ 30,000$ per year. $\qquad$
3. Find the equation for line or curve of best fit for the following data.

Result of two tests given to a group of Mathematic students:

| Test 1 $(\boldsymbol{x})$ | 60 | 50 | 80 | 80 | 70 | 60 | 100 | 40 | 90 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Test 2 $(\boldsymbol{y})$ | 80 | 70 | 70 | 100 | 50 | 80 | 100 | 60 | 80 |

a. What is your equation? $\qquad$
b. Estimate the result of test 2 for someone who made a $95 \%$ on test 1 . $\qquad$
4. Find the equation for line or curve of best fit for the following data.

b. What is your equation?
c. Estimate the value of $y$ when $x$ is 4 .
$f(4)=$

