The table shows the average temperature ( ${ }^{\circ} \mathrm{F}$ ) for five months in a certain city. Find the rate of change for each time period. During which time period did the temperature increase at the fastest rate?

| Month: | 2 | 4 | 5 | 8 | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Temp ( ${ }^{\circ}$ ) | 54 | 62 | 67 | 76 | 78 |



Anne was reading a book. She wrote down what page she was on at various times:

- Was she reading at a constant rate?

| Time | Page |
| :--- | :--- |
| $1: 45$ | 0 |
| $1: 50$ | 15 |
| $2: 00$ | 45 |
| $2: 03$ | 54 |
| $2: 19$ | 102 |

- If not, when was she reading faster or slower?



## Rate of Change=

A Nashville Fire Department tanker truck had access to a certain number of gallons of water at a recent fire. After several hours the firefighter realized he did not record the initial amount of water as he was required, but he knew the truck used water at a constant rate. He recorded the following information:

| \# of hours at the <br> scene | 0 | 3 | 5 | 8 | $?$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| \# of gallons <br> remaining | $?$ | 336,000 | 240,000 | 96,000 | 0 |

- How many gallons per hour does the truck use?
- How much water did the truck have originally?
- How long will it take the truck to run out of water?

Here is an $x / y$ table. Is the rate of change constant? Show using the numbers in the table, then verify with the graph.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
| 1 | 10 |
| 5 | 16 |
| 6 | 17.5 |
| 8 | 23.5 |
| 11 | 28 |



Here is an $x / y$ table. Is the rate of change constant? Show using the numbers in the table, then verify with the graph.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :--- | :--- |
| 1 | 1 |
| 2 | 4 |
| 3 | 9 |
| 4 | 16 |
| 5 | 25 |



Do the points on the graph have a constant rate of change? If so, what is this rate? Make an $x / y$ table to help you with your calculations.


The table shows the number of bikes made by a company for certain years. Find the rate of change for each time period. During which time period did the number of bikes increase at the fastest rate?

| Year | 1 | 2 | 5 | 7 | 11 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bikes | 32 | 35 | 47 | 47 | 61 |

