Math 3H Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per:\_\_\_

7.2 Average Rate of Change

**Find the average rate of change for each function on the specified interval.**

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| **Find the average rate of change and interpret its meaning.** |
| 1. The average temperature per month is shown in the table below. Find the average rate of change from March to October.

 | 1. The table below shows the amount of carbon dioxide in the Earth’s atmosphere for selected years. (Source: the Weather Channel.) Find the average rate of change from 1968 to 2003.

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| 1. A cup of hot liquid is left out to cool. The graph below displays its temperature over time. Find the average rate of change from 4 to 12 minutes.

 | 1. The graph below displays the number of infections per month for every 1,000 computers since 1990. Find the average rate of change from 1991 to 1998.

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| 1. The graph below represents the height in inches of boys age x months. Find the average rate of change from 6 months to 16 months.

 | 1. The graph below shows the percentage of on time flights per year since 1998. Find the average rate of change from 1999 to 2003.

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| 1. A square of side x inches is cut out of each corner of a 22 in. by 9 in. piece of cardboard, and the sides are folded up to form an open-topped box.
2. Draw a model to demonstrate this problem.
3. Write a function for the volume of the box.
4. State the domain.
5. Find the dimensions of the cut out squares that will produce the box of maximum volume, then state the dimensions of the box.

Length: Width: Height: Volume:Dimensions of the box: |