## Lesson 10: Rate of Change

* Let’s calculate the rate of change of some relationships.

### 10.1: Growing Bamboo

The graph represents function , which gives the height in inches of a bamboo plant months after it has been planted.



1. What does this statement mean?
2. What is the value of ?
3. What is if ?
4. What is the value of ?
5. How many inches does the plant grow each month? How can you see this on the graph?

### 10.2: A Growing Account Balance

The balance in a savings account is defined by the function . This graph represents the function.

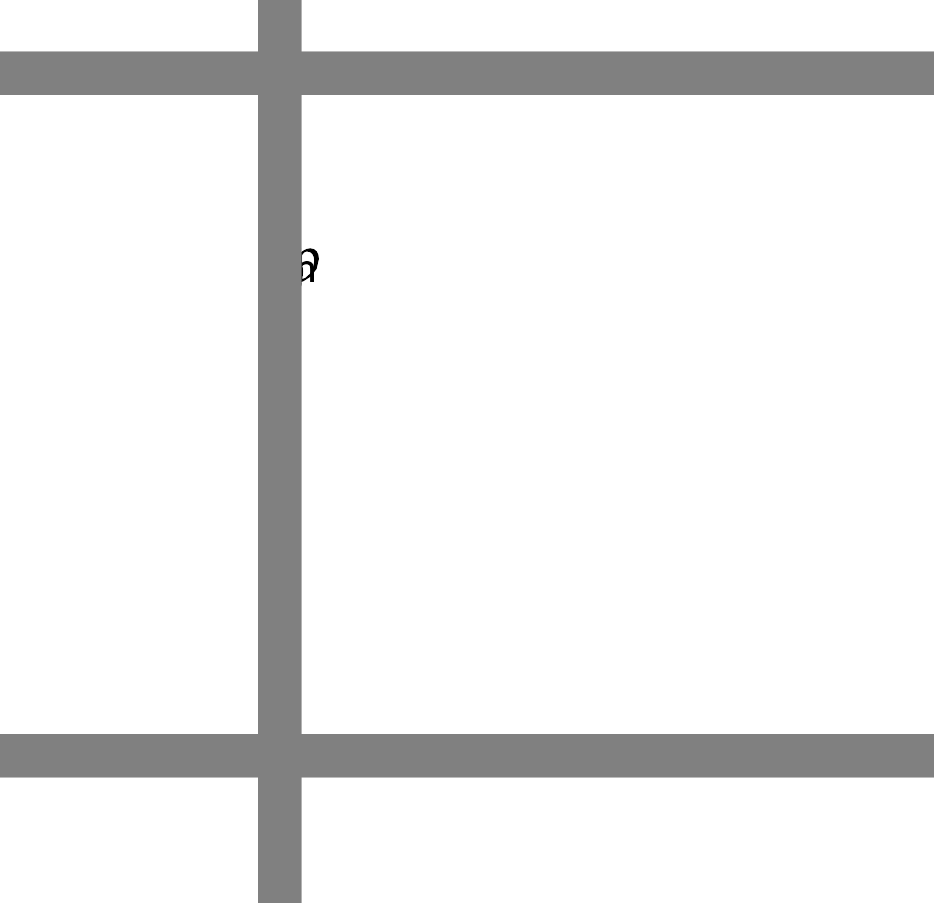


1. What is . . .
2. Also calculate
3. You should have gotten the same value, twice. What does this value have to do with this situation?

### 10.3: The Temperature Outside

Here is a graph and a table that represent the same function. The function relates the hour of day to the outside air temperature in degrees Fahrenheit at a specific location.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| 0 | 48 | 6 | 57 |
| 1 | 50 | 7 | 56 |
| 2 | 55 | 8 | 55 |
| 3 | 53 | 9 | 50 |
| 4 | 51.5 | 10 | 52 |
| 5 | 52.5 |  |  |



Match each expression to a value. Then, explain what the expression means in this situation.

* 4
* -2.75
* 44
* -1.4
* 55
* 14
* -11
* 38
* -10
* 52



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