

NAME \_\_\_\_\_

*For a test grade*      DATE \_\_\_\_\_ PERIOD *2nd/4th* *11/1/13*

**Lesson 7 Problem-Solving Practice**  
**Constant Rate of Change**

$$\frac{\Delta y}{\Delta x}$$

*All*

1. List 2 ordered pairs
2.  $\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$
3. Label  $x_1, y_1$
4. Substitute into the formula
5. Simplify
6. Label
7. Write a sentence

1. **WATER** At 2 P.M., the level of the water in the pool was 10 feet. At 6 P.M., the level of water was 2 feet. Find the constant rate of change of the water.

*(2 PM, 10 ft)*  
*(6 PM, 2 ft)*  
*Δ*

2. **MONEY** JoAnne is depositing money into a bank account. After 3 months there is \$150 in the account. After 6 months, there is \$300 in the account. Find the constant rate of change of the account.

3. **TEMPERATURE** The temperature at noon was 88°F. By 4 P.M., the temperature was 72°F. Find the constant rate of change of the temperature.

4. **GROWTH** Jaz was 43 inches tall. Eighteen months later, she was 52 inches tall. Find the constant rate of change for Jaz's height.

5. **BIKING** The graph represents how far Toby biked given the number of weeks he has been biking. Find the constant rate of change.

**Biking**

6. **HAIR** Find the constant rate of change.

<b>Months</b>	4	5	6	7
<b>Length (in.)</b>	8	10	12	14

*See attached sheet for example*

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M7  
H 1.7 Pg 16

1.  $\begin{matrix} x_1 & y_1 \\ (2\text{PM}, 10\text{ft}) \\ (6\text{PM}, 2\text{ft}) \\ x_2 & y_2 \end{matrix}$

$$\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 10}{4} = \frac{-8}{4} = \frac{-2\text{ft}}{1\text{h}}$$

Every hour the water level in the pool decreased two feet.