

# The Slope of the Line as an Average Rate of Change

Name \_\_\_\_\_

Math 101 (Sect. 2.4), Math 103 (Sect. 2.2), Math 160 (Sect. R.4) and Math 180 (Sect. 1.4)

Use the line graph shown below to solve the problem.

1) The line graph represents the gallons of water in a swimming pool after  $x$  hours. There is a pump that can either add or remove water from the pool.

a) Label axes with words and units.

b) Find the slope of the line segment from  $(0, 60)$  to  $(2, 443)$ . Round to the nearest tenth.

c) USING WORDS within the context of the problem, interpret this slope as a rate of change.

During the first two hours, ..... is .....

at a rate of ..... per .....

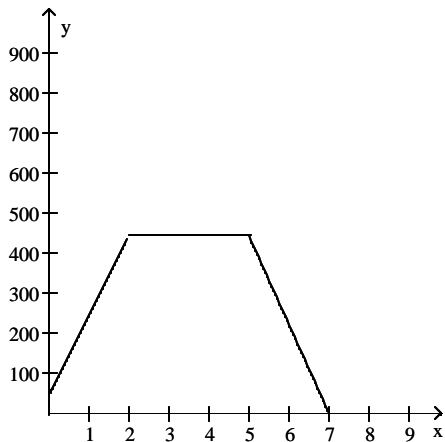
d) Find the slope of the line segment from  $(5, 443)$  to  $(7, 0)$ . Round to the nearest tenth.

e) USING WORDS, within the context of the problem interpret this slope as a rate of change.

During the time interval  $[5, 7]$ ..... is .....

at a rate of ..... per .....

f) Use words within the context of the problem to describe what happens during the time interval  $[2, 5]$



**This is the format used when interpreting**

The .....(description of the variable  $y$ )..... is .....(increasing / decreasing) ..... at a rate of

..... (.....units of  $y$ ..... per .....units of  $x$ .....)