

Rate of Change is a ratio that compares the *change in y* with the *change in x*.

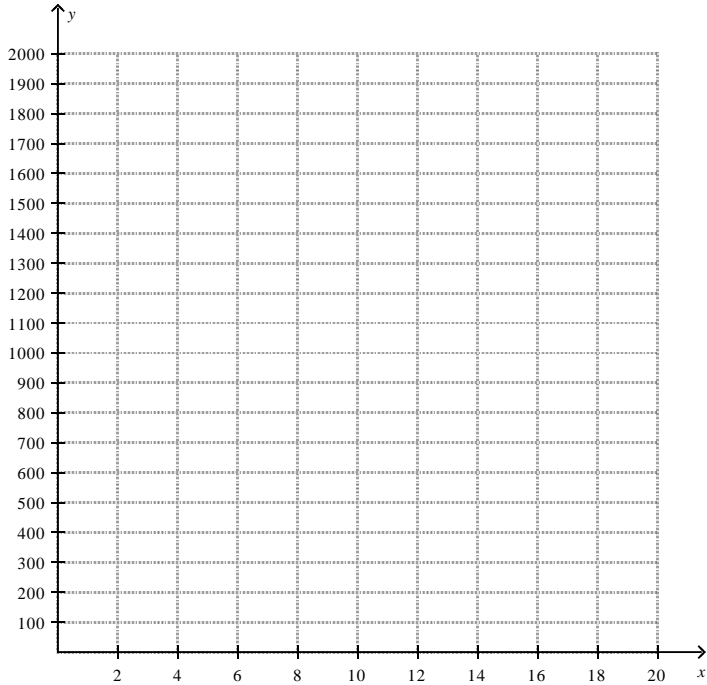
Mountain Climbers

Carlos was climbing a mountain that Emilio was descending when they met. Carlos left at 8 am from an altitude of 350 feet and gained 100 ft/hr. Emilio left at 8 am from an altitude of 1850 feet and lost 150 ft/hr.



1. Complete the following table and graph the data.

Time (Hours)													
Carlos' Altitude (Feet)													
Emilio's Altitude (Feet)													



- 2. What is Carlos' rate of change?
- 3. What is Emilio's rate of change?
- 4. What is the y-intercept for Carlos? What does it mean in terms of this situation?

- 5. What is the y-intercept for Emilio? What does it mean in terms of this situation?
- 6. How many hours pass before they meet? What time of day is this?
- 7. At what altitude did they meet?

Example 1: Calculate the rate of change for each section of the graph.

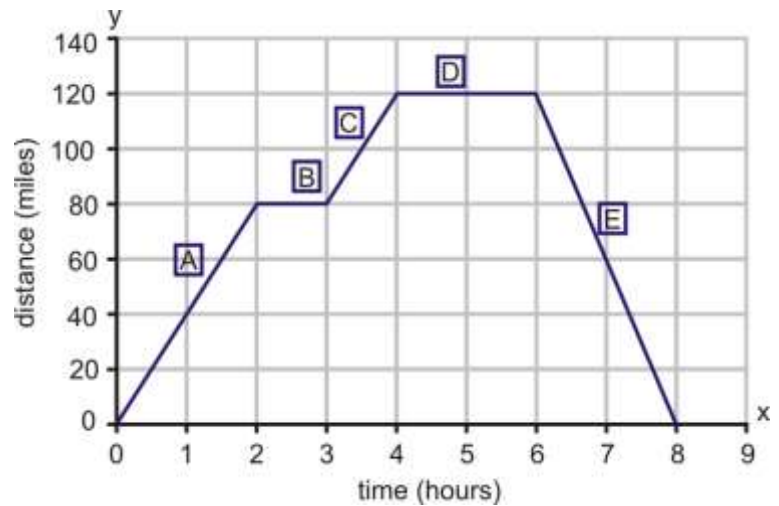
A.

B.

C.

D.

E.



Example 2: Calculate the rate of change for each table. Explain what the rate of change means for each situation.

a.

Time (min)	Water left in pool (gal)
10	80
20	60
30	40
40	20

b.

Hours	Amount Earned
2	10
4	20
6	30
8	40

c.

Time (min)	Calories
15	60
30	120
45	180
60	240

Do you find the table or the graph an easier way to understand the information? Why?

Homework: Unit 2 Day 1 Worksheet