

Name _____

Period _____

Take A Hike

Directions: Today you are going to make several graphs, which describe the distance you walk as a function of time. You are going to sketch the graphs you obtain as well as record the slope for 4 different graphs. It is important that you follow my exact directions to obtain sound data and answers.

1. Have one person hold the CBR. The other person will be the walker. Push the trigger button to begin graphing. When the CBR makes its' ticking sound, have the walker walk **slowly (baby steps) away from the CBR**. When the graph is finished, place a sketch of the graph below and record the required values:



Sketch of Graph 1

(x , y)
Point 1: (,)

Slope:

Point 2: (,)

Equation of the line:

2. Do the same as in #1, except the walker will now walk a little bit faster away from the CBR (**fast baby steps**).



Sketch of Graph 2

(x , y)
Point 1: (,)

Slope:

Point 2: (,)

Equation of the line:

3. This attempt will be similar to #1, except the walker will be about 10 feet away from the CBR and will take **baby steps towards** the CBR.



Sketch of Graph 3

(x , y)
Point 1: (,)

Slope:

Point 2: (,)

Equation of the line:

4. This attempt will be similar to #3, except the walker will be about 10 feet away from the CBR and will take **fast baby steps towards** the CBR.



Sketch of Graph 4

(x , y)
Point 1: (,)

Slope:

Point 2: (,)

Equation of the line:

5. What is the slope measuring in this activity? (*Think about what is represented on the x and y axes*)

6. Why are some of your slopes positive, and others negative? What does this have to do with the direction you are traveling in relation to the CBR?

7. What does a slope of higher magnitude (greater number) mean as far as the pace at which you walk?

8. If I gave you the following slope, based on the activity tell me as much as you can about how the person was walking: slope = -4.5

9. How would you generate the graph of a parabola?

10. What determines whether the parabola opens up or down?

11. Is it possible to make the graph of a circle? Why or why not?