

p.27

Introduction to the CBR

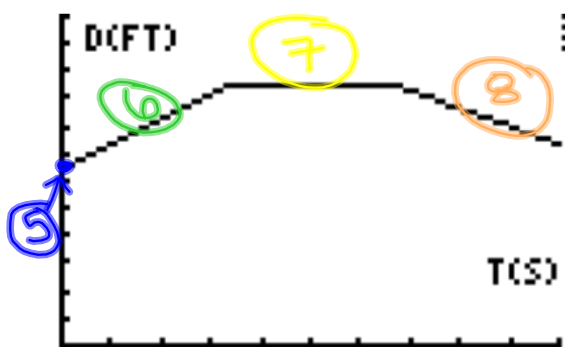
Warm Up – watch the YouTube video and then answer the following questions.

<http://www.youtube.com/watch?v=r9mvRRwu5Gw>

1. How does the boy in the video detect objects around him?
2. How does his detection method allow him to know how far or close he is from an object?

We will be using very similar methods as this boy did to make graphs of how our distance from an object changes over time. We will be doing this with the CBR.

Example Graph from a CBR:



1. What do you think the T in this graph represents?

Time

2. What do you think the s represents?

seconds

3. What does the d represent?

distance

4. The distance is measured in feet?

5. Where are you starting?

~6.5 ft from CBR

6. What happens at the beginning of this graph?

walking away from CBR

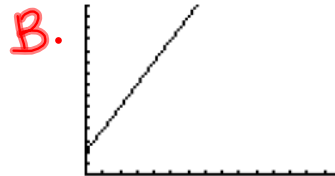
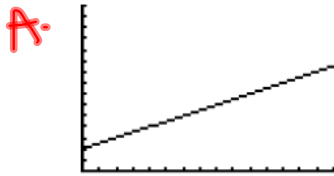
7. What happens in the middle of this graph?

standing still

8. What happens at the end of this graph?

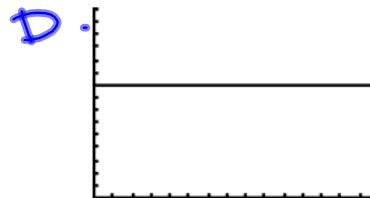
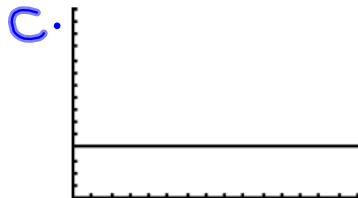
walking towards CBR

Using a calculator and CBR, let's try to match the following graphs:



1. Compare and contrast how you "walked the graph" to make the two graphs above.

- walking away (both)
- start @ same place
- B is moving faster



2. Compare and contrast how you "walked the graph" to make the two graphs above.

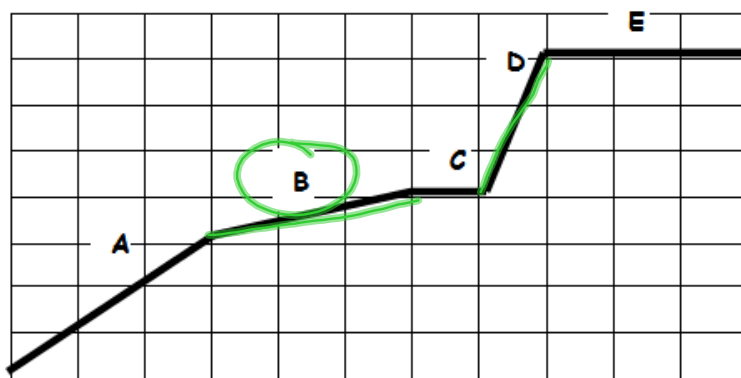
- standing still (both)
- starting distance from CBR is further on D.

Summary:

Speed Walked	CHANGES	steepness faster → steeper slower → flatter
Direction Traveled	CHANGES	away ↗ towards ↘
Standing Still	MAKES	graph flat (constant)

This graph represents the trip that Robert takes every morning to walk to school. Each section of the graph represents a part of Robert's trip.

Distance from Robert's House



Time (minutes)

1. Which part of Robert's trip was he going the slowest, but not standing still?

B

2. During which part of the trip was he traveling the fastest?

D

3. During which part of the trip was he at the school?

E