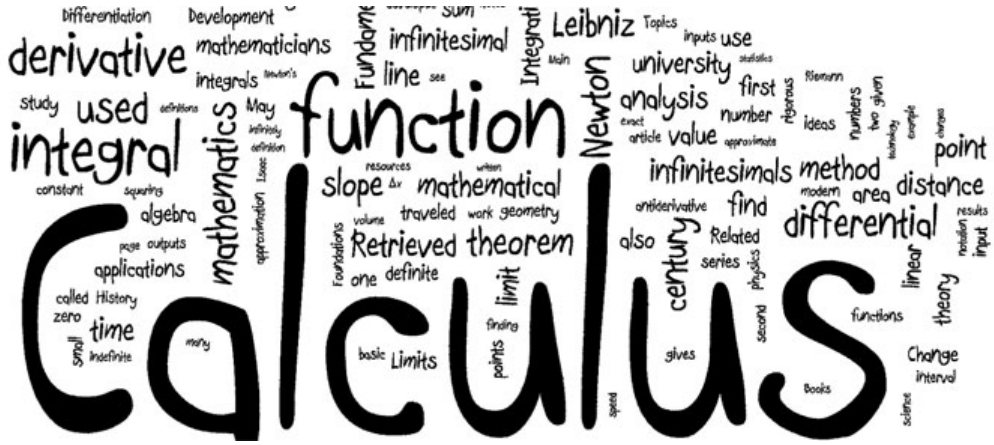
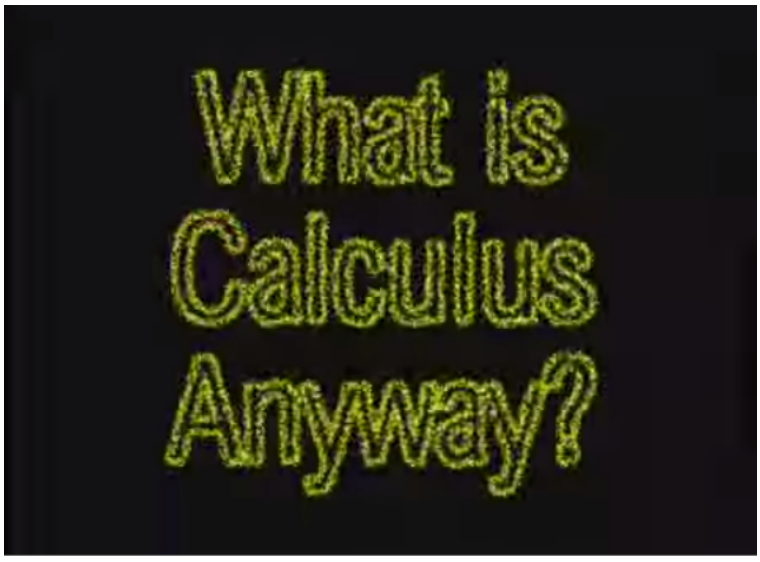
Sit wherever you would like today.



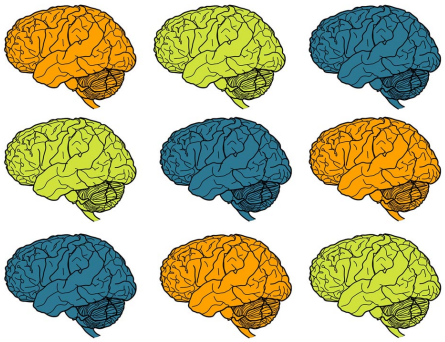


(1:32)

http://www.cleanvideosearch.com/media/action/yt/watch?videoId=ismnD_QHKkQ

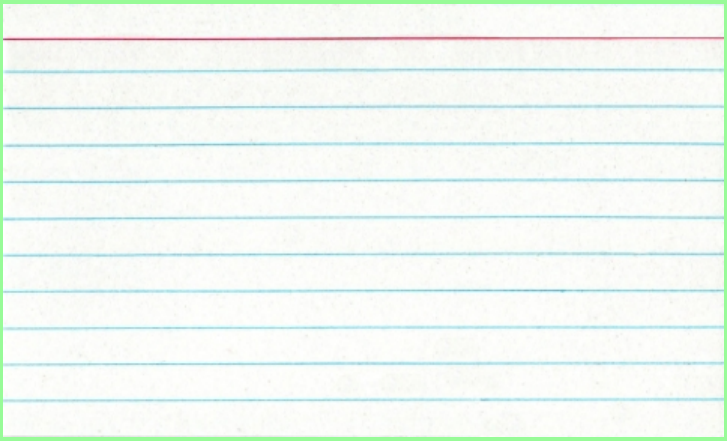

SPINACH

https://www.youtube.com/watch?v=yxe1MLuilQw



BC FUN NIGHT

Stand and Deliver



CU Succeed
AP Calculus BC
website

Bear Creek High School (061043) - Calculus BC, All Students

Section Summary								Subject Summary	
Score	5	4	3	2	1	Total Students	Average Score	Total Students	Average Score
Total Students	11	9	4	3	0	27	4.037	27	4.037

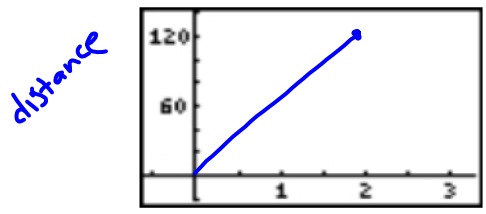
Bear Creek High School (061043) - Calculus BC: AB Subscore, All Students

Section Summary								Subject Summary	
Score	5	4	3	2	1	Total Students	Average Score	Total Students	Average Score
Total Students	15	5	5	2	0	27	4.222	27	4.222

A Preview of Calculus

The distance from Denver, Colorado, to Cheyenne, Wyoming, is approximately 120 miles.

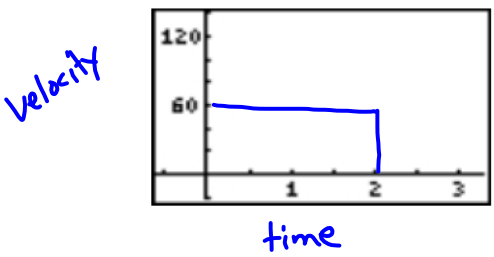
1. If I make this trip at a constant velocity, and it takes me 2 hours, how fast am I traveling? 60 mph
Sketch a graph of my distance traveled vs. time below.



$D(t) = 60t$

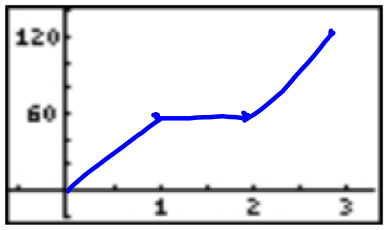
What is the equation of the distance vs. time graph above? _____

What would the graph of the velocity vs. time graph look like? Sketch it below.



It is easy to see that the slope of the distance vs. time graph is the height of the constant function for the velocity vs. time graph. But, an interesting question is, how could the velocity vs. time graph tell the distance I traveled on the trip?

2. Suppose, during my trip from Denver to Cheyenne, after an hour of driving, I decide to stop for lunch. Lunch takes me an hour to eat and then I am back on my way. Assume that during the first and third hour of my trip I am again traveling at a constant rate of 60 miles per hour (which is highly unlikely!) Sketch a graph of this distance vs. time graph, and find a rule for the equation.

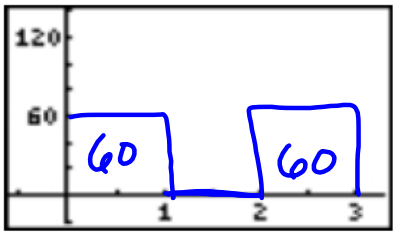


$$D(t)=\begin{cases} 60t, & 0\le t<1 \\ 60, & 1\le t<2 \\ 60t-60 & 2\le t\le 3 \end{cases}$$

(2,60) (3,120)

$\frac{120-60}{3-2}=60$ $y-60=60(x-2)$

What would the graph of this velocity vs. time graph look like? Sketch it below.



Velocity

time

Can this velocity vs. time graph be used to find the total distance traveled? Explain.

60+60=120