

## Precalc – Warm Up – 2/16/11

Name: \_\_\_\_\_ Period: \_\_\_\_\_

1) A car travels 60 miles per hour for one hour. How far does it travel?

2) A car travels 60 miles per hour for two hours. How far does it travel?

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# Precalc – How far did we travel? – 2/16/11

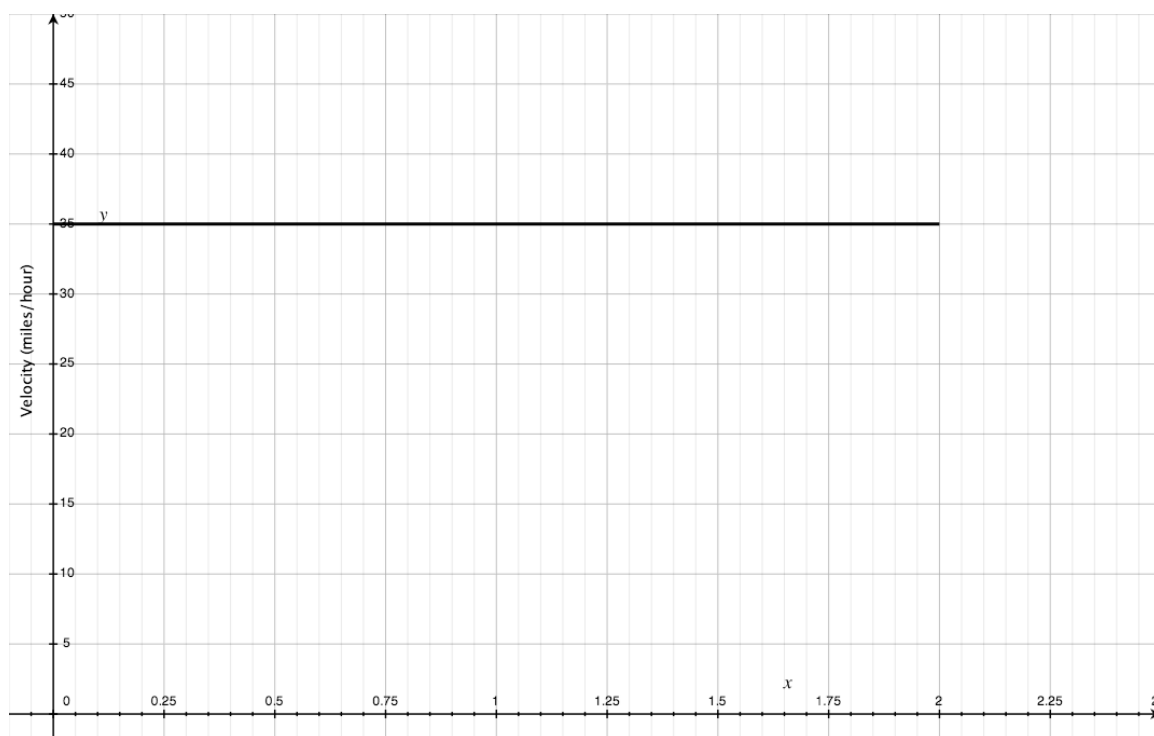
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Students will be able to estimate distance traveled given a graph of velocity vs. time

Imagine that you are driving to a friend's house and you want to know how far you have driven. But, the odometer in your car isn't working. You decide to use your velocity (by looking at the speedometer) and the time it takes you to travel to school to figure out how far you went.

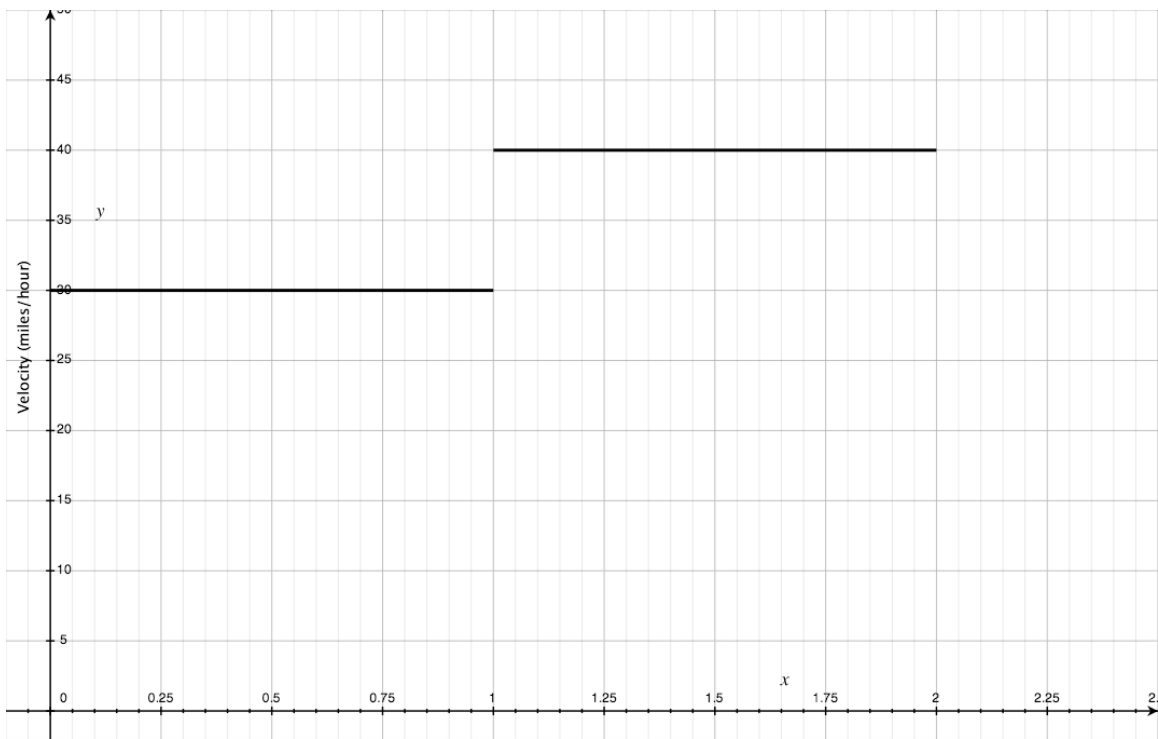
- 1) Before you set out on the journey you make up some numbers to practice.  
If you travel 35 miles/hour for 2 hours, how far did you drive?

- 2) To help yourself think about the problem you graph your speed and the time.



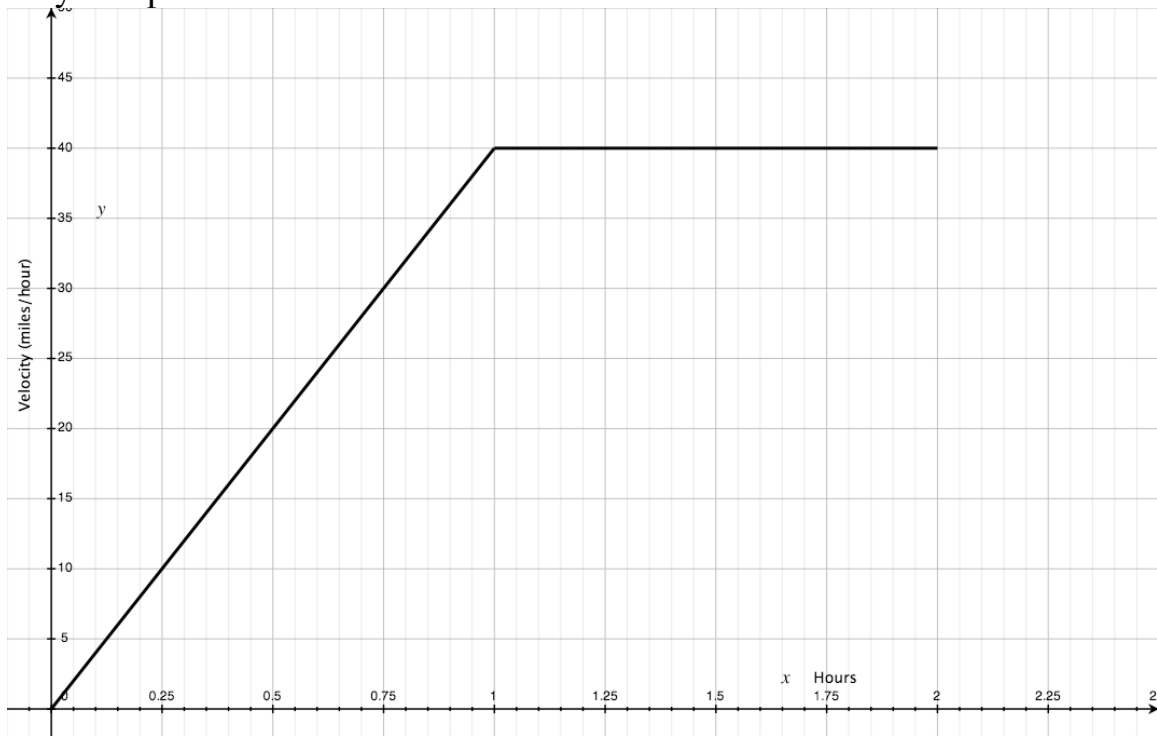
3) You realize that your model is not entirely realistic because you travel exactly the same speed the entire time. So, you decide to make it a little more complex. Now, you imagine that you travel 30 miles per hour for 1 hour and then 40 miles per hour for the second hour. How far did you travel?

4) You graph your results again.





5) This model still seems too simple. So you create a graph to represent your speed.



6) How far did you travel during the second hour (the interval  $1 \leq x \leq 2$ )?

7) How far did you travel during the first hour?

8) How far did you travel over the entire 2 hours?

9) You make an even more complicated version of your graph.



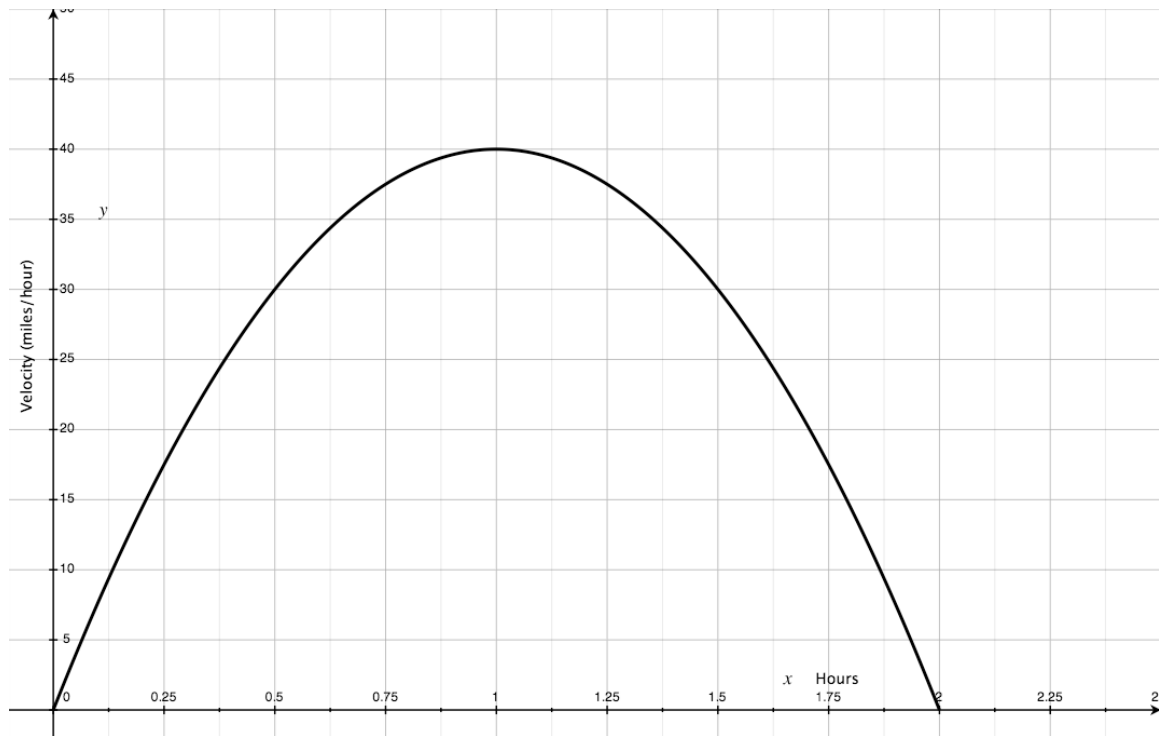
10) How far did you travel during the 2 hours?

11) You make an even more complicated version of your graph.



12) How far did you travel during the 2 hours?

13) Finally, you actually make the trip and keep track of your velocity. The following graph represents your velocity at different times.



14) **ESTIMATE** how far you traveled during the 2 hours.



# Precalc – Exit Slip – 2/16/11

Name: \_\_\_\_\_

Period: \_\_\_\_\_

The graph below represents your velocity (on the y-axis in miles per hour) vs. time (on the x-axis in hours) on a recent 5-hour car trip.

Estimate the total number of miles you traveled.

