

CALCULUS: MINI PROJECT

1. Take a ride with a friend or a relative.

2. Write down the odometer (miles) reading before you start.

3. Write down your velocity (from the speedometer mph) and time elapsed at least 9 times during the ride. For example if you go for a 20 minute (1/3 hr.) ride, you could record your velocity every 2 minutes (1/30 hr.).

4. Write down the odometer (miles) reading at the end of your ride.

5. Plot points (elapsed time in hours, velocity in miles per hour) on a coordinate axis.

6. Make sure to clearly label each axis with the appropriate label and units.

7. Connect the points with straight lines.

8. Find the area under the graph using triangles, trapezoids, or rectangles. Show a complete list of calculations that you used to find the combined area.

9. Find the difference in the beginning and the ending odometer readings.

10. Compare your answer of #8 and #9 above: Is there anything significant or interesting?

11. Write a few sentences on why you think the two quantities would be so close.

If you work with a friend in this class, I want you to repeat the data collection process generating a second set of data. Each student should submit a project with their own set of data.

