

- (11.) (5 points) Suppose that on your visit home over break you meet a friend who is now taking precalculus at your old high school. He knows the formula “distance travelled = rate \times time.” He also knows some students who are taking the calculus course at the high school, and he has heard there is a more general formula, “distance travelled = area under the velocity curve,” that computes the distance, even when the velocity is not constant. He asked those students to explain this second formula, but they just shrugged and said he would have to wait until he learned calculus to get an explanation.

Write down what you would tell your friend to explain why the second formula holds and how it is related to the formula he has learned in precalculus. Be sure to include any appropriately labelled graphs you might draw in making your explanation.

Please **print** your name here:

Name _____

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