

Calculus 1
Test 1 Num 6b

Student question: My answer was $65/2 = 32.5$ but the book got $140-20/4 = 30$. What is the margin of error on these problems? Can I count this as correct?

Our answer:

My first response is to be very careful about the "margin of error" allowance. Being off by decimal points is reasonable evidence to suggest you got the concept right but just estimated a little more than others, but with your answer having several differences to the answer given (including being almost 3 whole numbers different in the final answer), I would suggest we examine your process to be sure you're getting the main ideas.

Often students make mistakes in their work because they missed a key concept issue, but because their final answer was "close" they move forward without correcting the larger problem. So in order to make sure that's not what's happening here, I need to know what you did to arrive at your answer.

If you were able to sketch the graph, find the point $t=2$, then draw line and estimate the slope, and doing all of that is how you got your answer then your answer is probably "close enough". After all, it is a graph and you are estimating, so some variance among answers is expected.

However, if you arrived at your answer in some other way than what I have outlined here--or if the words limit and slope didn't play into your answer at all--- I would suggest returning to the problem and figuring out what was missing because in that case, there would likely be a concept gap you needed to fill.

(Instantaneous velocity and how that compares to average velocity, is covered in your textbook on pages 98-99)