MA 120-12 §1.1 - 2.2

score

1. Your home is 20 miles from school. You leave your home and drive toward school. When you are halfway there, you realize that you left you calculator at home, so you turn around and return home driving very fast. Once home, it takes you several minutes to find your calculator. You then drive to school quickly. Let d(t) denote the distance you are from school

at time *t*. Sketch a graph of d(t) the reflects the given information. (6 points)

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- 2. You have two investment options for \$10,000 over 10 years that you need to choose between. At Bubba's Investments, Bubba will agree to let you money grow linearly by adding 8% of the base each year, i.e., each year you gain 8% of \$10,000. Fred's Investments will guarantee a 6% growth rate compunded continuously. Find formulas that show the amount in each potential investment as a function of time and sketch their graphs toether on the interval from t = 0 to t = 20. Then calculate the amount in each investment after 10 years. (7 points)
- 3. Sketch a graph of the derivative of the function depicted to the right on the same set of axes. *(7 points)*

