Quiz 2

This is a two-stage quiz. During the first stage, use your knowledge & calculator to take this quiz. You have 15 min. In the second stage, you are now welcome to use your books, notes, and students in the class to retake the same quiz. You have 15 min. to write one solution (with everyone's name on it!!!) to be turned in for the group.

Show *all* your work. Reasonable supporting work must be shown for any partial credit.

1. [3] The graph on the right is of the velocity function $v(t)$ of a particle moving along a line, measured in meters per second.
   (a) [1] Estimate the velocity of the particle at $t = 6$.

   (b) [2] Find how far the particle has moved along the line in the first 5 seconds.

   (c) Let $p(x) = \int_0^x v(t)\, dt$.
       i. [1] Find $p(5)$

       ii. [2] Find $p'(6)$.

2. [2] Is the total distance traveled by the particle the same as the net distance? Justify your answer.

3. [2] Classify $\int 2^x + \sqrt[5]{x}\, dx$ as a family of functions or a number. (You do not need to find it!)