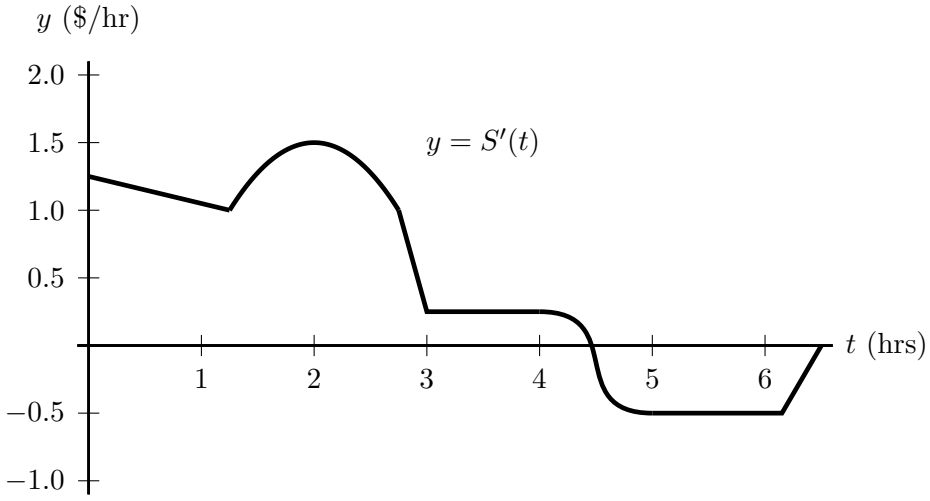
2. [8 points] Suppose that a new company named Calculus Knowledge, which provides calculus consulting work, was posted on the New York Stock Exchange over the summer. Let $S(t)$ be a continuous and differentiable function that models the price, in dollars, of one share of Calculus Knowledge stock t hours after 9:30 am on October 6, 2014.
The graph of $S'(t)$ for $0 \le t \le 6.5$ is shown below.



Note: The graph above is the graph of $S'(t)$. It is **not** the graph of $S(t)$.

a. [2 points] Estimate when the price of the stock is rising most quickly on October 6, 2014.

Answer: 11:30 am

b. [2 points] According to the model $S(t)$, at which of the times 10 am, 11 am, 12 noon, and 1 pm was the price of one share of Calculus Knowledge stock the lowest on October 6, 2014?
Circle ONE *time or circle* CANNOT BE DETERMINED *if the answer cannot be determined from the information provided.*

[10 am] 11 am 12 noon 1 pm CANNOT BE DETERMINED

c. [2 points] On which, if any, of the following intervals does it appear that the function $S(t)$ is always decreasing? *Circle* ALL *correct choices or circle* NONE OF THESE *if appropriate.*

$0 < t < 1$ $2 < t < 3$ $4 < t < 5$ [$5 < t < 6$] NONE OF THESE

d. [2 points] On which, if any, of the following intervals does it appear that $S(t)$ is linear? *Circle* ALL *correct choices or circle* NONE OF THESE *if appropriate.*

$0 < t < 1$ $1 < t < 2$ [$3 < t < 4$] [$5 < t < 6$] NONE OF THESE