10. [11 points] Let \( w(t) \) be the amount of water, in cubic meters (m\(^3\)), in a small pond \( t \) hours after noon on a certain summer day. The function \( w'(t) \), the derivative of \( w(t) \), is graphed below.

![Graph of w'(t) vs. t]

a. [3 points] At 10 PM, is the amount of water increasing or decreasing? Circle your answer below. At what rate? Include units.

Answer:  
\[
\begin{array}{c|c|c|c}
\text{Increasing} & \text{Decreasing} & \text{at a rate of:} & 1 \text{ m}^3/\text{hr} \\
\end{array}
\]

b. [2 points] Over which of the following intervals of \( t \), if any, is the amount of water in the pond constant? Circle all correct answers.

\[
\begin{array}{c|c|c|c}
[0, 1] & [1, 3] & [11, 12] & \text{None of these} \\
\end{array}
\]

c. [2 points] Over which of the following intervals of \( t \), if any, is the amount of water in the pond decreasing at a constant rate? Circle all correct answers.

\[
\begin{array}{c|c|c|c}
[0, 1] & [1, 3] & [11, 12] & \text{None of these} \\
\end{array}
\]

d. [2 points] At which of the following times \( t \) is the amount of water in the pond increasing the fastest? Circle the one correct answer.

\[
\begin{array}{c|c|c|c}
t = 4 & t = 6.3 & t = 7 & t = 10 \\
\end{array}
\]

e. [2 points] At which of the following times \( t \) does the pond contain the least amount of water? Circle the one correct answer.

\[
\begin{array}{c|c|c|c}
t = 0 & t = 4 & t = 6 & t = 12 \\
\end{array}
\]