8. [6 points] Let $C(t)$ be the temperature, in degrees Fahrenheit ($^\circ$F), of a cat café $t$ hours after noon on a certain winter day. The function $C'(t)$, the derivative of $C(t)$, is graphed below.

![Graph of $C'(t)$](image)

a. [2 points] Over which of the following intervals of $t$, if any, is the temperature of the cat café constant? Circle all correct answers.

- $[0, 1]$
- $[5, 6]$
- $[7, 8]$
- $[11, 12]$
- None of these

b. [2 points] Over which of the following intervals of $t$, if any, is the temperature of the cat café decreasing? Circle all correct answers.

- $[2, 3]$
- $[3, 4]$
- $[8, 9]$
- $[9, 10]$
- None of these

c. [1 point] At which of the following times $t$ is the temperature in the cat café changing most rapidly? Circle the one correct answer.

- $t = 1.5$
- $t = 2.5$
- $t = 8$
- $t = 9$

d. [1 point] At which of the following times $t$ is the temperature in the cat café the highest? Circle the one correct answer.

- $t = 0$
- $t = 2.5$
- $t = 7$
- $t = 12$