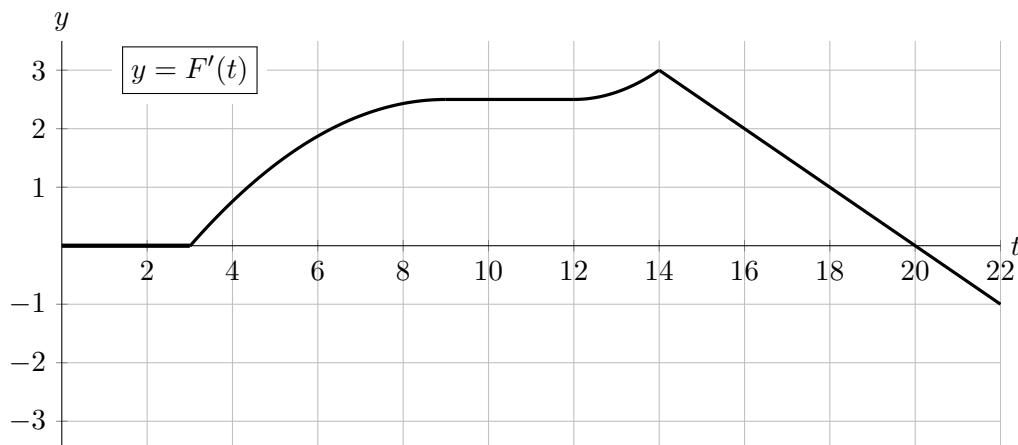


2. [9 points] An environmentalist for a local county has found some data on the county's forest cover. In particular, letting the "forest cover", $F(t)$, be the percentage of the county (by area) that was covered by forest t years after the start of 2000, the environmentalist has the graph of $F'(t)$, the **derivative** of $F(t)$, as shown below.



- a. [3 points] At the start of 2016, was the forest cover increasing or decreasing? Circle your answer below. At approximately what rate? *Include units.*

INCREASING

DECREASING

at a rate of \approx _____

- b. [2 points] During which of the following years, if any, did the amount of forest cover appear to remain constant for the entire year? Circle **all** correct answers.

2001

2010

2018

2020

NONE OF THESE

- c. [1 point] Which **one** of the following statements **best** describes the forest cover during 2004? Circle the numeral of your answer.

- i. The amount of forest cover increased faster and faster as the year went on.
- ii. The amount of forest cover was increasing, but grew more slowly as the year went on.
- iii. The amount of forest cover increased at a constant rate.

- d. [3 points] At which of the following times t did the county have the most forest cover? Circle the **one** correct answer, then **explain** in *two sentences or fewer* how you know.

 $t = 0$ $t = 3$ $t = 14$ $t = 20$ $t = 22$ **Explanation:**