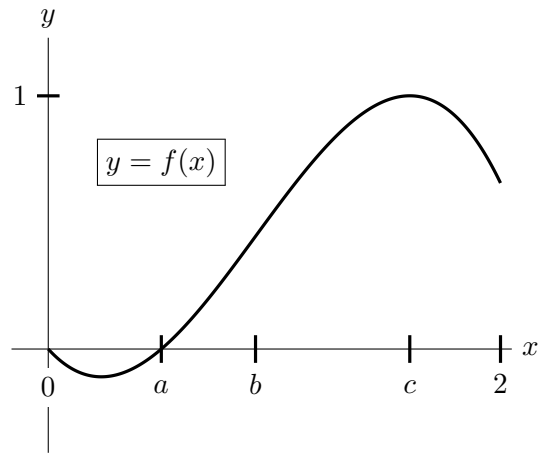


9. [10 points]

The graph of a function $y = f(x)$ with domain $[0, 2]$ is given to the right, along with three points $a < b < c$ in the interval $(0, 2)$.

Additionally:

- Note that $f(0) = f(a) = 0$ and that $f(c) = 1$.
- Suppose $F(x)$ is an antiderivative of $f(x)$.



In each part below, two quantities are separated by a box. In each part, state which of the two quantities is larger, or if they are equal, by clearly writing $<$, $=$, or $>$ in the box if this is possible; otherwise, if there is not enough information to relate the two quantities, write NEI in the box.

a. $\int_0^c f(x)dx$ $\int_a^c f(x)dx$

f. $\int_0^2 f'(x)dx$ $f(2)$

b. $\int_0^2 f(x)dx$ $\int_2^0 f(x)dx$

g. $F(b)$ 0

c. $\int_a^2 f(x)dx - \int_0^a f(x)dx$ $\int_0^2 |f(x)|dx$

h. $F(b)$ $F(c)$

d. $f'(b)$ $\frac{1}{2} \int_0^2 f'(x)dx$

i. $\int_a^c f''(x)dx$ 0

e. $\frac{1}{2} \int_0^2 f(x)dx$ 1

j. $\int_a^2 f(x)dx$ $\int_a^2 f(x)^2 dx$