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. $\int_{0}^{c} f(x) d x<\int_{a}^{c} f(x) d x$
b. $\int_{0}^{2} f(x) d x>\int_{2}^{0} f(x) d x$
c. $\int_{a}^{2} f(x) d x-\int_{0}^{a} f(x) d x \equiv \int_{0}^{2}|f(x)| d x$
d. $f^{\prime}(b)>\frac{1}{2} \int_{0}^{2} f^{\prime}(x) d x$
e. $\frac{1}{2} \int_{0}^{2} f(x) d x \quad<1$
f. $\int_{0}^{2} f^{\prime}(x) d x \equiv f(2)$
g. $F ( b ) \longdiv { \mathrm { NEI } } 0$
h. $F(b)<F(c)$
i. $\int_{a}^{c} f^{\prime \prime}(x) d x<0$
j. $\int_{a}^{2} f(x) d x>\int_{a}^{2} f(x)^{2} d x$

