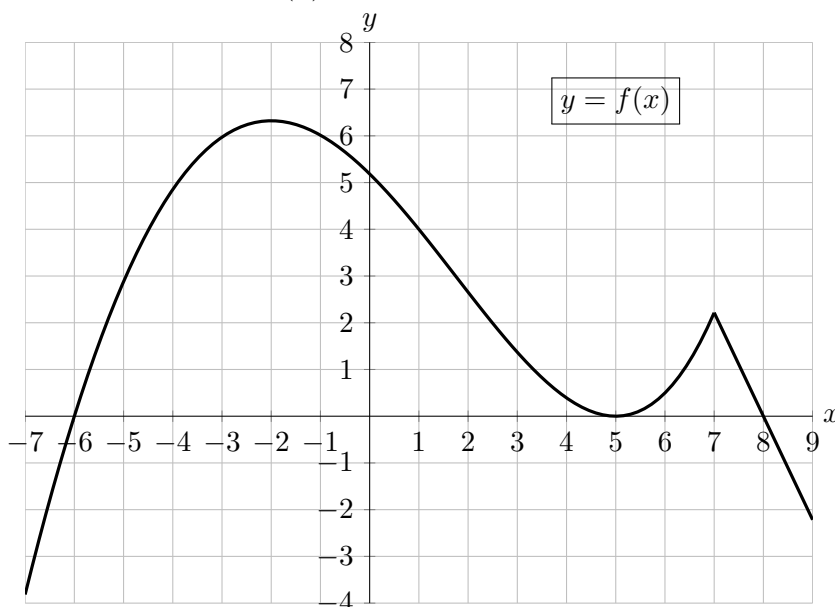


3. [10 points] Consider the function $f(x)$ graphed below.



- a. [3 points] Let $F(x) = \int_0^x f(t) dt$. Find the x -coordinates of all local extrema of $F(x)$ and classify them as local maxima or local minima. Write “NONE” if there are none.

Answer: Local maxima at $x =$ _____

Answer: Local minima at $x =$ _____

- b. [3 points] Let $G(x) = \int_{3x}^{x^2} f(t) dt$. Compute $G'(-1)$.

Answer: $G'(-1) =$ _____

- c. [2 points] Which approximation method is guaranteed to underestimate $\int_{-4}^0 f(x) dx$?

MID TRAP LEFT RIGHT NONE OF THESE

- d. [2 points] Which approximation method is guaranteed to overestimate $\int_{-1}^5 f(x) dx$?

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