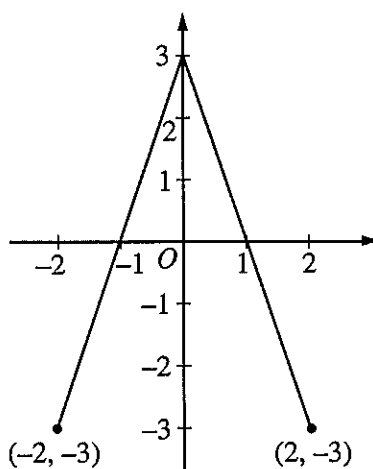


CALCULUS BC
SECTION II, Part B

Time—45 minutes

Number of problems—3

No calculator is allowed for these problems.

Graph of f

4. The graph of the function f shown above consists of two line segments. Let g be the function given by

$$g(x) = \int_0^x f(t) dt.$$

- (a) Find $g(-1)$, $g'(-1)$, and $g''(-1)$.
- (b) For what values of x in the open interval $(-2, 2)$ is g increasing? Explain your reasoning.
- (c) For what values of x in the open interval $(-2, 2)$ is the graph of g concave down? Explain your reasoning.
- (d) On the axes provided, sketch the graph of g on the closed interval $[-2, 2]$.

(Note: The axes are provided in the pink test booklet only.)

make your own axes