6.5 Behavior of Accumulation Functions
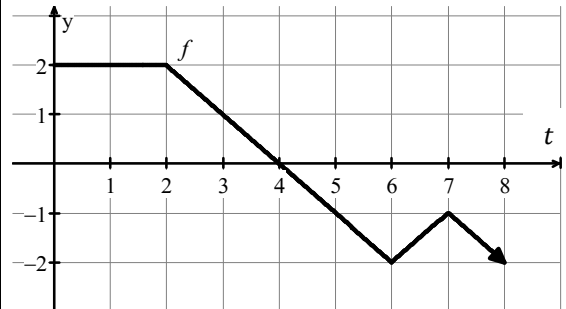
Calculus Name: _____

1. Let $g(x) = \int_a^x f(t)\, dt$ with the graph of f shown above and a is a constant. Find the x-values of g regarding each of the following conditions.

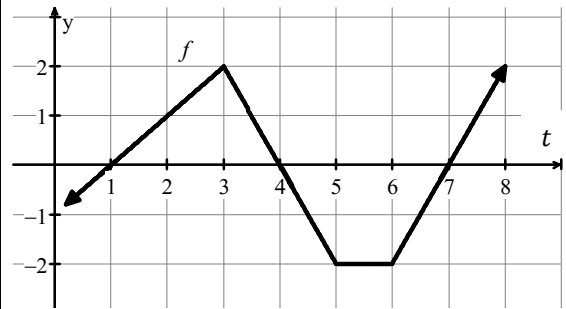| a. Relative minimum(s)	b. Relative maximum(s)
c. Concave up	d. Concave down
e. Increasing	f. Decreasing

g. Point(s) of inflection

h. If $g(2) = -2$, what is the maximum value of g on the interval $[0, 8]$?

i. Given $h(x) = \int_0^{3x-2} f(t)\, dt$. Find the x-value where h has a relative maximum.

2. Let $g(x) = \int_a^x f(t)\, dt$ with the graph of f shown above and a is a constant. Find the x-values of g regarding each of the following conditions.

a. Relative minimum(s)	b. Relative maximum(s)
c. Concave up	d. Concave down
e. Increasing	f. Decreasing

g. Point(s) of inflection

h. If $g(3) = -4$, what is the minimum value of g on the interval $[3, 8]$?

i. Given $h(x) = \int_0^{\frac{x}{3}+7} f(t)\, dt$. Find the x-value where h has a relative maximum.