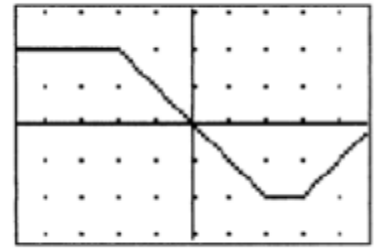


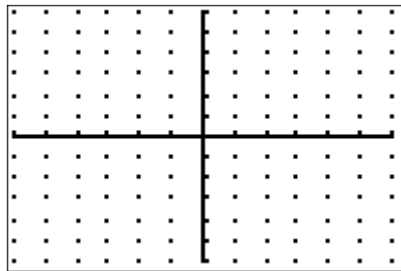
The graph of  $f(t)$  is shown at right. Assume that 1 tick = 1 unit .  
Use the concept of accumulated area to draw a sketch of the following:



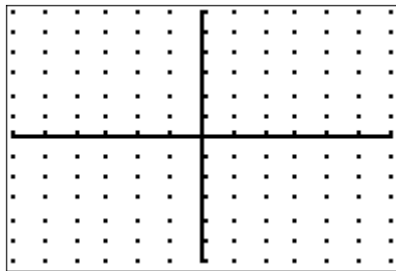
Graph of  $f(t)$

$x$	-4	-3	-2	-1	0	1	2	3	4
$g(x)$									
$h(x)$									
$k(x)$									

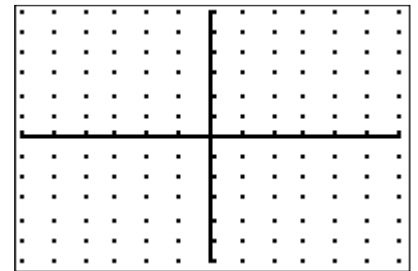
(a)  $g(x) = \int_0^x f(t) dt$



(b)  $h(x) = \int_2^x f(t) dt$



$k(x) = \int_{-4}^x f(t) dt$



When does  $g(x)$  reach a maximum? Justify your answer.

When does  $h(x)$  reach a maximum? Justify your answer.

When is the graph of  $k(x)$  concave down? Justify your answer.

Let  $f(t)$  be the function shown at right. Let  $q(x) = \int_{-2}^x f(t) dt$ .

Which is greater?  $q(-1)$  or  $q(2)$

Which is greater?  $q'(-1)$  or  $q'(2)$

Which is greater?  $q''(-1)$  or  $q''(2)$

