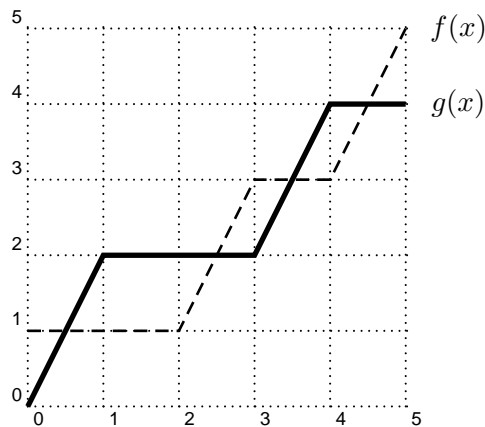
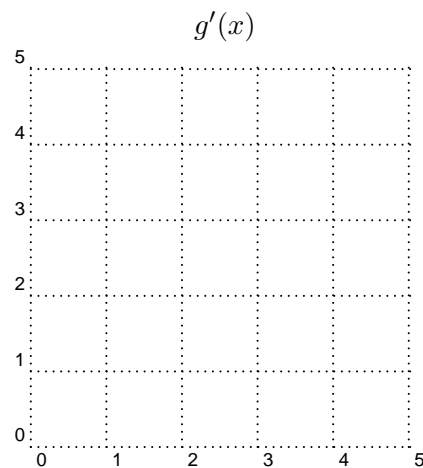
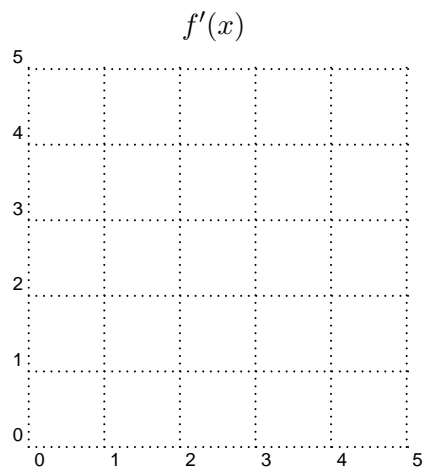


8. (14 points) Use the functions  $f(x)$  and  $g(x)$  graphed below to answer the following questions:



(a) (3 points each) Graph  $f'(x)$  and  $g'(x)$ .



(b) (2 points) Compute  $h'(3)$  for  $h(x) = f(g(x))$ .

(c) (2 points) Define  $r(x) = g(x) - f(x)$ . For what  $x$  value(s) in  $[0, 5]$  is  $r(x)$  maximum?

(d) (2 point) Find  $s'(2.5)$  for  $s(x) = f(x)g(x)$ .

(e) (2 points) Find  $w'(2.5)$  for  $w(x) = f(x)/g(x)$ .