

8. [12 points] Use the following graph and table to calculate the integrals below.

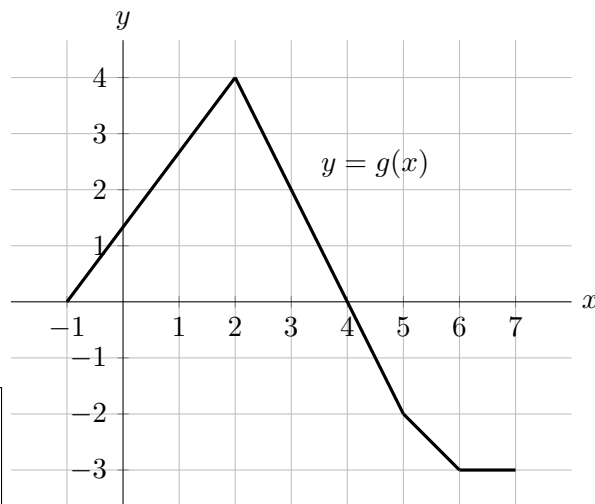
The table below gives several values of a differentiable function  $f$  and its derivative  $f'$ . Assume that both  $f(x)$  and  $f'(x)$  are positive and continuous.

$x$	-2	-1	0	1	3
$f(x)$	0.5	3	4	10	30
$f'(x)$	2	0.5	5	2	22

You are not required to show your work on this problem. However, limited partial credit may be awarded based on work shown.

For each of parts **a.-c.** below, find the exact value of the given quantity. If there is not enough information provided to find the exact value, write "NOT ENOUGH INFO."  
All your answers must be in **exact** form.

Let  $g$  be the piecewise linear function with graph shown below.



a. [4 points] Find  $\int_3^4 tg'(t) dt$ .

Answer: \_\_\_\_\_

b. [4 points] Find  $\int_{-1}^1 \frac{2f'(2x+1)}{f(2x+1)} dx$ .

Answer: \_\_\_\_\_

c. [4 points] Find  $\int_1^3 \frac{f'(x)(7f(x)+11)}{(f(x)+1)(2f(x)+4)} dx$ .

Answer: \_\_\_\_\_