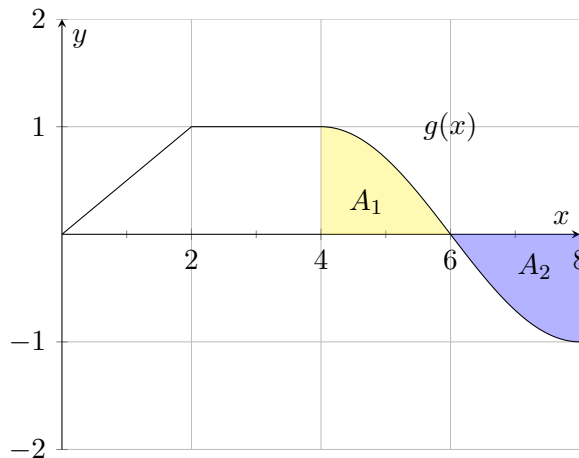


6. [15 points] Let  $g(x)$  be an **odd** function, with part of the graph given as below.



Both shaded regions  $A_1$  and  $A_2$  have area 1.2.

Let  $G(x)$  be an antiderivative of  $g(x)$  with  $G(2) = 2$ .

- a. [6 points] Copy the following table onto your paper and fill in with the exact values of  $G(x)$ . You do not need to show your work for this part, but you may receive credit for correct work shown.

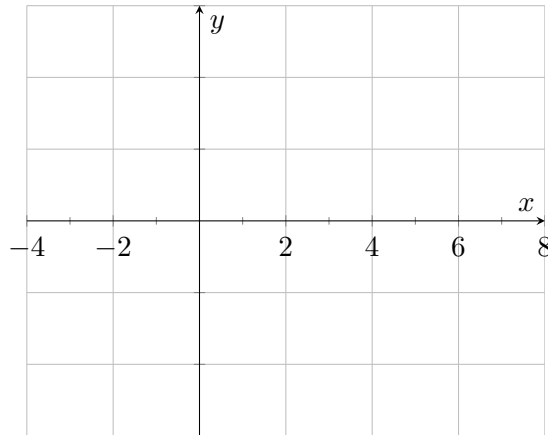
$x$	-4	-2	0	2	4	6	8
$G(x)$				2			

*Solution:*

$x$	-4	-2	0	2	4	6	8
$G(x)$	4	2	1	2	4	5.2	4

- b. [9 points] Sketch a graph of  $G(x)$  from  $x = -4$  to  $x = 8$  on **hand-drawn axes**, similar to those given below. Pay attention to
- if  $G(x)$  is increasing / decreasing;
  - if  $G(x)$  is concave up / concave down / linear;
  - all critical points and points of inflection.

Label the  $(x, y)$ -coordinates of all the critical points of  $G(x)$ . If you are worried that the concavity of your drawing is unclear, also label if each portion of your graph is concave up, concave down, or linear.



*Solution:*

