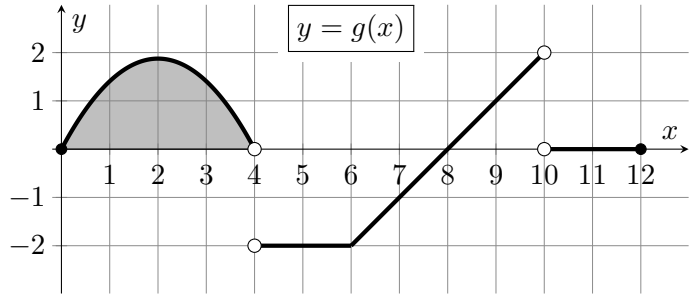


2. [15 points] A function $g(x)$ is graphed below and has the following properties:

- $g(x)$ is piecewise linear for $x > 4$.
- The shaded region has area 5.



Let $G(x)$ be the continuous antiderivative of $g(x)$ satisfying $G(6) = -1$.

a. [5 points] Use the graph of $g(x)$ to complete the table below with the **exact** values of $G(x)$.

x	0	4	6	8	10	12
$G(x)$			-1			

b. [10 points] Sketch a graph of $G(x)$ on the interval $[0, 12]$ using the axes provided below. Be sure to pay attention to:

- where $G(x)$ is and is not differentiable;
- where $G(x)$ is increasing, decreasing, or constant;
- where $G(x)$ is concave up, concave down, or linear;
- the slope of $G(x)$ at $x = 2$;
- the values of $G(x)$ you found in the table in part a.

