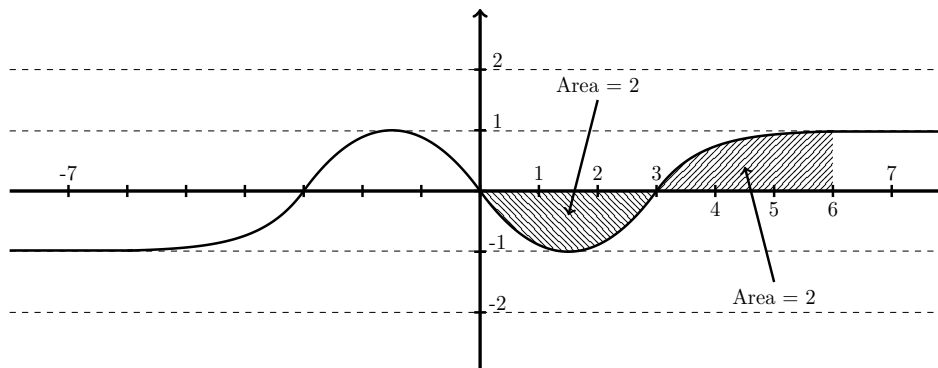


2. [17 points]

The graph of an odd function  $f$  is shown below.



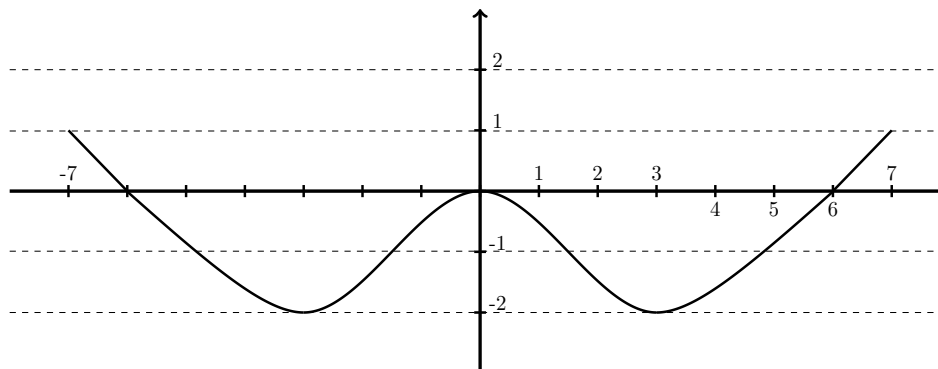
a. [7 points] Let  $F(x)$  be the antiderivative of  $f(x)$  with the property that  $F(3) = -2$ . Use the graph of  $f(x)$  to compute the following values of  $F(x)$ .

$x$	-7	-6	-3	0	3	6	7
$F(x)$							

*Solution:*

$x$	-7	-6	-3	0	3	6	7
$F(x)$	1	0	-2	0	-2	0	1

b. [8 points] Sketch the graph of  $F(x)$  from  $x = -7$  to  $x = 7$ . **Label all points of inflection.**



c. [2 points] Calculate the average value of  $f$  between  $x = -3$  and  $x = 7$ .

*Solution:*  $\frac{1}{7-(-3)} \int_{-3}^7 f(x)dx = \frac{3}{10}$