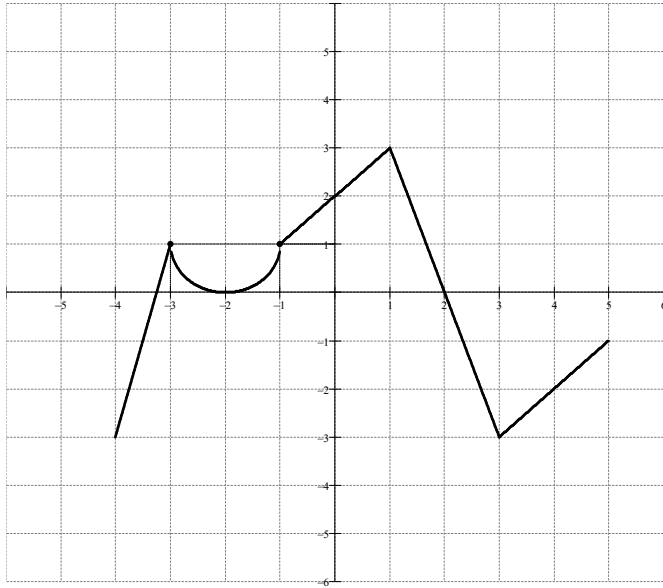


## Integrals and Area Assignment

All answers should be left as an exact values or rounded to three decimal places.

The graph shown is the graph of a function  $y = f(x)$  on  $[-4, 5]$ . It consists of line segments and a semicircle.



Let  $F(x) = \int_0^x f(t) dt$

1. Find the following using geometry.

a)  $F(0)$

d)  $F(1)$

b)  $F(-1)$

e)  $F(-3)$

c)  $F(3)$

f)  $F(5)$

2. Find the absolute minimum and absolute maximum value of  $F(x)$ . Justify your answer.

3. At which values of  $x$  does  $F(x)$  have a point of inflection? Justify your answer.

4. Using the information from questions 1-3, draw a sketch of  $F(x)$  on the axes below.

