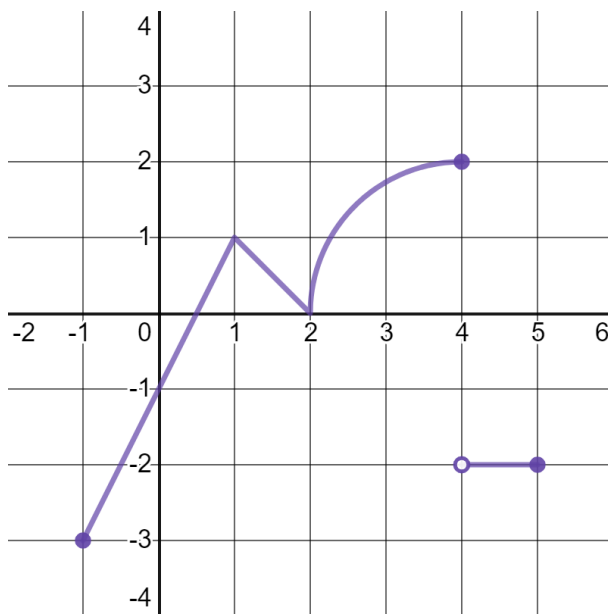# Fundamental Theorem of Calculus Quiz

Name: _____ Due Date: May 19, 2020

1. Consider the function

$$g(x) = \int_{-1}^{x} f(t)dt$$

where $f$ is given below (made of lines and circle segments).



(a) Determine the absolute maximum and minimum value of $g$ (both the $x$ and $g(x)$ value)

(b) State the $x$ value of any inflection points of $g$

2. Evaluate the following

(a) $\int_0^1 e^x + \dfrac{3}{x-2} - \dfrac{1}{(x+1)^3} dx$

(b) $\int \dfrac{2x^2 - x + 4}{1 - 2x} dx$