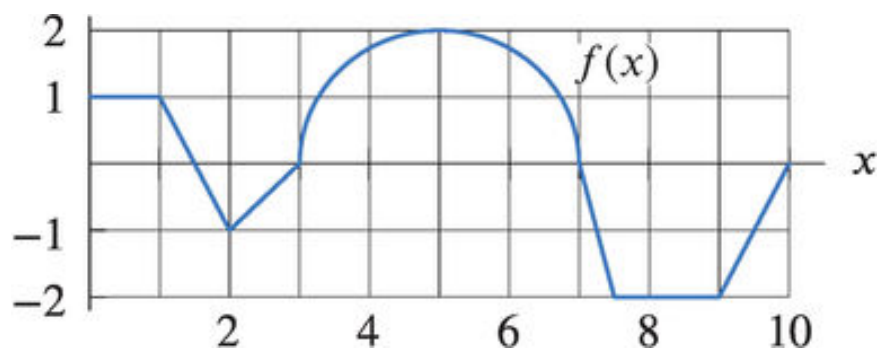


Name:

Section 5.3 – In class examples

Math 151



1. Use the figure to find the values of

(a) $\int_0^2 f(x) dx$

1, notice that the area under the curve consists of a square of area, 1 and two triangles, whose areas cancel out because they are identical and one is above and the other below the x -axis.

(b) $\int_3^7 f(x) dx$

2π , the area under the curve is $\frac{1}{2}$ of the circle of area $\pi(2^2)$.

(c) $\int_2^7 f(x) dx$

$2\pi - \frac{1}{2}$, the semi-circle is above the x -axis but the triangle of area $\frac{1}{2}$ is below the x -axis

(d) $\int_5^8 f(x) dx$

$\pi - \frac{3}{2}$, the quarter circle has area π the area below the x -axis has area $\frac{3}{2}$.