Name: _____

Quiz 24

MATH 200
November 30, 2023

1. Find the area under the graph of $y = \cos(x)$ between $x = 0$ and $x = \pi/2$.

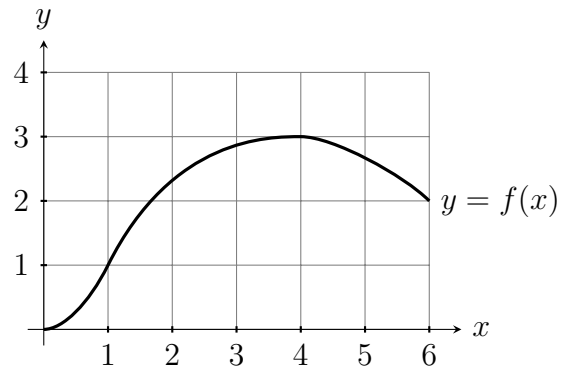
2. $\displaystyle\int_0^4 \left(3x^2 + 2x\right)\, dx =$

3. $\displaystyle\int_1^2 \left(x + \frac{1}{x^2}\right)\, dx =$

4. Find the derivative of the function $F(x) = \displaystyle\int_x^0 \frac{e^t \sin(\pi t)}{t^5 + e^t}\, dt$.

5. The graph of a function $f(x)$ is shown below.

   Find $\displaystyle\int_4^6 f'(t)\, dt$.



Name: _____

Quiz 24

MATH 200
November 30, 2023

1. Find the area under the graph of $y = \sin(x)$ between $x = 0$ and $x = \pi$.

2. $\displaystyle\int_1^2 \left(2x - 3x^2 + 1\right)\, dx =$

3. $\displaystyle\int_0^{\sqrt{3}/2} \frac{1}{\sqrt{1-x^2}}\, dx =$

4. Find the derivative of the function $F(x) = \displaystyle\int_x^{\pi} \frac{t^5 + e^t}{e^t \ln(t)}\, dt$.

5. The graph of a function $f(x)$ is shown below.

   Find $\displaystyle\int_1^4 f'(t)\, dt$.