Name: _____

Quiz 24

MATH 200
April 26, 2022

1. Find the area under the graph of $y = x^2 + 2$ between $x = -1$ and $x = 1$.

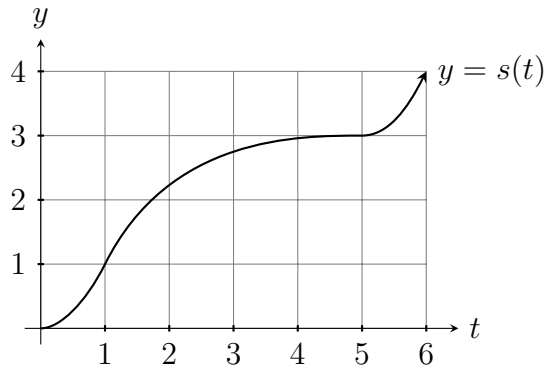
2. $\displaystyle\int_0^4 \left(\sqrt{x} + 2x\right)\, dx =$

3. $\displaystyle\int_1^{\sqrt{3}} \frac{1}{1+x^2}\, dx =$

4. Find the derivative of the function $F(x) = \displaystyle\int_0^x \frac{e^t \sin(\pi t)}{t^5 + e^t}\, dt$.

5. An object moving on a line has position $s(t)$ and velocity $v(t)$ at time t.
   The position function $s(t)$ is graphed below.

   Find $\displaystyle\int_1^5 v(t)\, dt$.



Name: _____

Quiz 24

MATH 200
April 26, 2022

1. Find the area under the graph of $y = \sqrt{x}$ between $x = 1$ and $x = 4$.

2. $\displaystyle\int_0^1 \left(x^2 + 2x + 1\right)\, dx =$

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

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

5. The derivative $f'(x)$ of a function $f(x)$ is graphed below. Suppose $f(2) = 3$. Find $f(-3)$.