

**WRITE YOUR NAME:**

**MAC 2312 WRITTEN HOMEWORK #1**

Due Tuesday January 16th, in Canvas

**Question 1.**

Evaluate the midpoint Riemann sum for the function  $f(x) = \sin x$  on the interval  $[0, \pi]$  using  $n = 3$  subintervals.

**Question 2.**

Evaluate the sum.

$$\sum_{k=1}^5 (100k^2 + 11)$$

**Question 3.**

Evaluate the definite integral using your knowledge of geometry.

$$\int_0^3 \sqrt{9 - x^2} dx$$

**Question 4.**

Evaluate the right-endpoint Riemann sum for the function  $f(x) = x^2$  on the interval  $[0, 6]$  using  $n = 60$  subintervals.