

Name: \_\_\_\_\_

## Quiz 2

Math 252

You have 20 minutes to complete this quiz and upload your work to Canvas. Write your answers on a separate sheet of paper and scan them with a scanning app. When you're finished, first check your work if there is time remaining, then turn it in. You may use a scientific calculator, but not a graphing one, and you may not consult other people or the internet. **Show all your work.**

1. (4 points) If  $2 \leq f(x) \leq 5$  for all  $x$  with  $-1 \leq x \leq 2$ , then  $A \leq \int_{-1}^2 f(x) \, dx \leq B$  for some numbers  $A$  and  $B$ . What are  $A$  and  $B$ ?

2. (8 points) Evaluate  $\int (3t + \sin(t)) \, dt$ .

3. (8 points) What is the average value of  $g(x) = \sin(x)$  on the interval  $[0, \frac{\pi}{3}]$ ?