

**Name:**

[1 pt]

**Problem 1.** An object is applied with a variable force of  $F(x) = \cos x$ . Find the work done in moving the object from  $x = 0$  to  $x = \pi$  meters.

[5 pts]

**Problem 2.** Find a number  $c$  such that the average value of the function  $f(x) = (x - 3)^2$  on the interval  $[2, 5]$  equals  $f(c)$ .

[5 pts]