Math 324 B, Fall 2018, Quiz 5

You have 5 minutes to complete the quiz. Each problem is worth 5 points.

Name: _____

1. Consider the conservative vector field $F(x, y, z) = \langle y \cos x + z, \sin x, x \rangle$. Find a potential function for F, i.e. a function f with $\nabla f = F$.

2. Use your result from question 1 to evaluate $\int_C F \cdot dr$, where C is the curve parameterized by $r(t) = (t, \sin(t), \cos(t))$ for $0 \leq t \leq \pi$.