

Name and last 4 digits of student ID: \_\_\_\_\_

Find the value of the line integral  $\int_C F \cdot ds$  where  $F(x, y) = (x + y, y^2 e^{\sin(y)})$  and  $C$  is the (positively oriented) rectangle with vertices  $(1, 0)$ ,  $(3, 1)$ ,  $(2, 3)$ , and  $(0, 2)$ .

HINT: No integration is necessary.