

Math 3298 Worksheet 41:

Group members (2 to 4): \_\_\_\_\_

- (1) Compute the value of the vector line integral  $\int_C F \cdot dr$  where  $F = (2y, x)$  and  $C$  is any path from  $(-1, -1)$  to  $(2, 2)$  that **does not** pass through  $(0, 0)$ . Be clear about what is your choice of path.

- (2) Compute the scalar line integral  $\int_C (y^2 + z) ds$  where  $C$  is the line segment from  $(3, 4, 0)$  to  $(1, 4, 2)$ .