

Math 3298 Worksheet 28: div, grad, curl

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

(1) Compute the divergence of the curl of  $\vec{F} = (xy^2, xyz, x)$ .

(2) Construct a vector field  $\vec{G}$  such that  $\text{curl}(\vec{G}) = (1, 0, 0)$  and each component of  $\vec{G}$  is non-constant.

(3) Can you find a function  $f(x, y, z)$  for which the  $\text{curl}(\nabla f) \neq 0$ ?