

Written HW14 – MATH 3503 Fall 2021

Due by 8 October for timely completion credit

For each given vector field, draw the vector field in software. For each given function f , draw its associated gradient field ∇f .

1. $\vec{F}(x, y) = \langle x - y, x + y \rangle$

2. $\vec{F}(x, y, z) = \langle x, -y, z \rangle$

3. $f(x, y) = x^2 + 2y^2$

4. $f(x, y, z) = z + ye^{x^2}$