

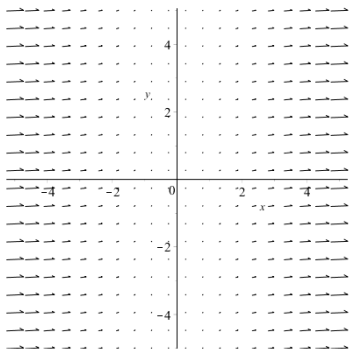
MATH 251: Practice 20

July 1, 2015

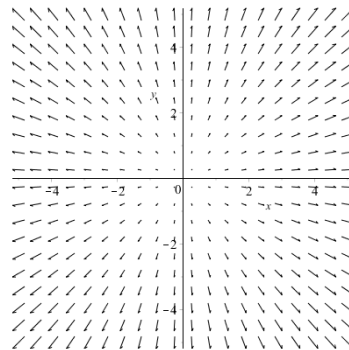
Name: _____

1. Identify the following vector fields

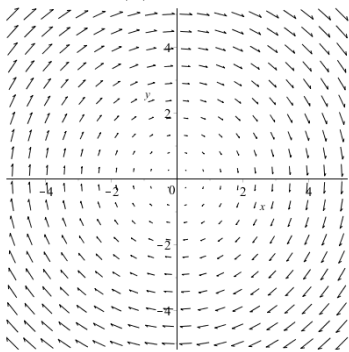
1. $\vec{F}_1 = \langle x, y \rangle$
2. $\vec{F}_2 = \langle y, -x \rangle$
3. $\vec{F}_3 = \langle x^2, 1 \rangle$
4. $\vec{F}_4 = \langle \sin(y), x \rangle$



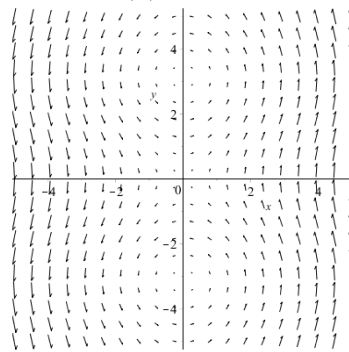
(a) _____



(b) _____



(c) _____



(d) _____

2. Calculate the scalar line integral of the function $f(x, y, z) = x + y$ over the curve $\vec{c}(t) = \langle t, \cos(t), \sin(t) \rangle$ from $t = 0$ to $t = 2\pi$.