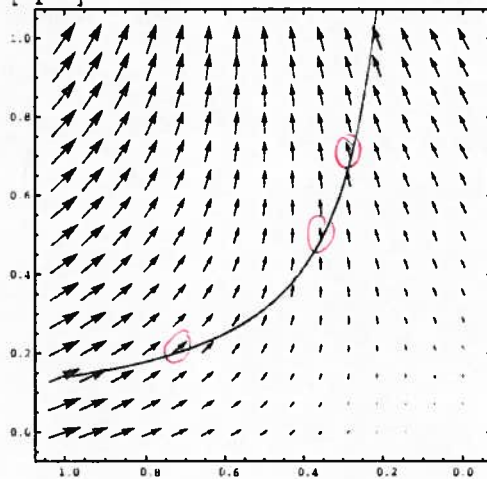# Math 241 C8   Name:

Quiz # 3

February 26, 2013

No electronic devices, notes, or interpersonal communication allowed.
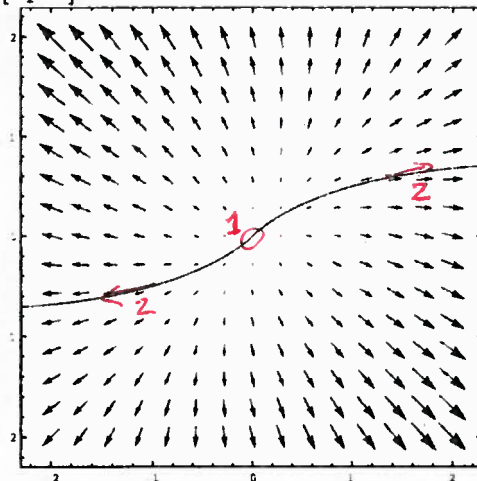
Show work to get credit.

(1) In each of the two pictures below, explain why the given curve is **not** a trajectory in the given vector field.

(a) [5pts]

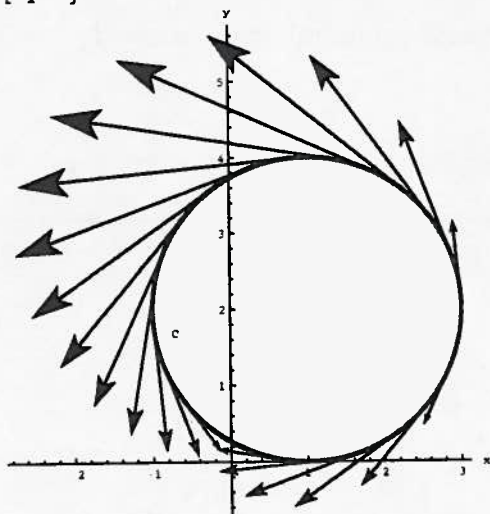
not following the vectors

(b) [3pts]

1) goes through a source

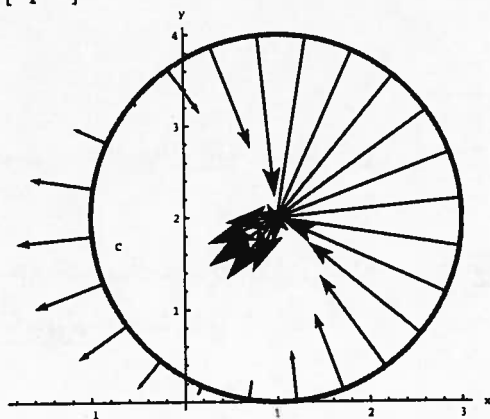*2) tries to follow the arrows, but in two different directions*

(2) Below are the tangential (a) and normal (b) components of a vector field **F** on the circle C. What do these tell you about the flow of **F** across/along C?

(a) [6pts]

net flow of $\vec{F}$ *along* C
is counterclockwise
(much larger and
many more arrows
counterclockwise
than clockwise)

(b) [6pts]

net flow of $\vec{F}$ *across* C
is inward
(larger & more arrows
inward than outward)