

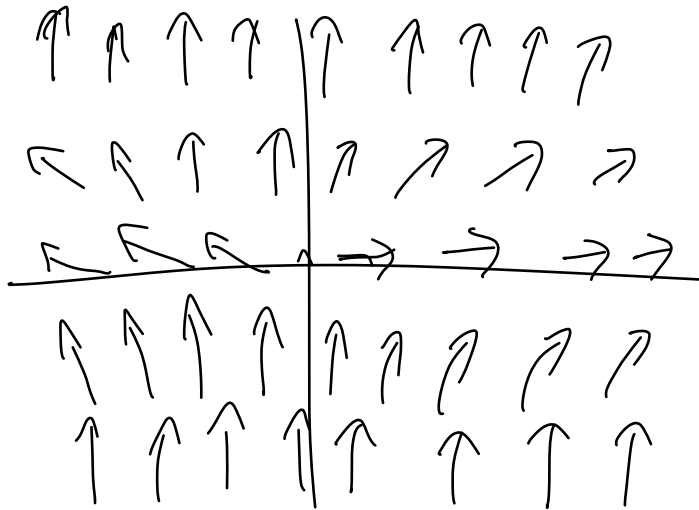
"QUIZ" for Lecture 17

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E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q17FirstLast.pdf) ASAP BUT NO LATER THAN Nov. 5, 8:00pm

1. Sketch the vector planar vector field

$$\mathbf{F} = \langle x, y^2 \rangle .$$



2. Find a potential function for the vector field \mathbf{F}

$$\mathbf{F} = \langle y \cos(xy), x \cos(xy) \rangle .$$

$$\nabla \times \mathbf{F} = \langle 0, 0, \cos(xy) - \cos(xy) \rangle = \langle 0, 0, 0 \rangle$$

$$\int y \cos(xy) dx = \sin(xy) + g(y)$$

$$x \cos(xy) + g_y = x \cos(xy)$$

$$g_y = 0$$

$$f = \sin(xy)$$