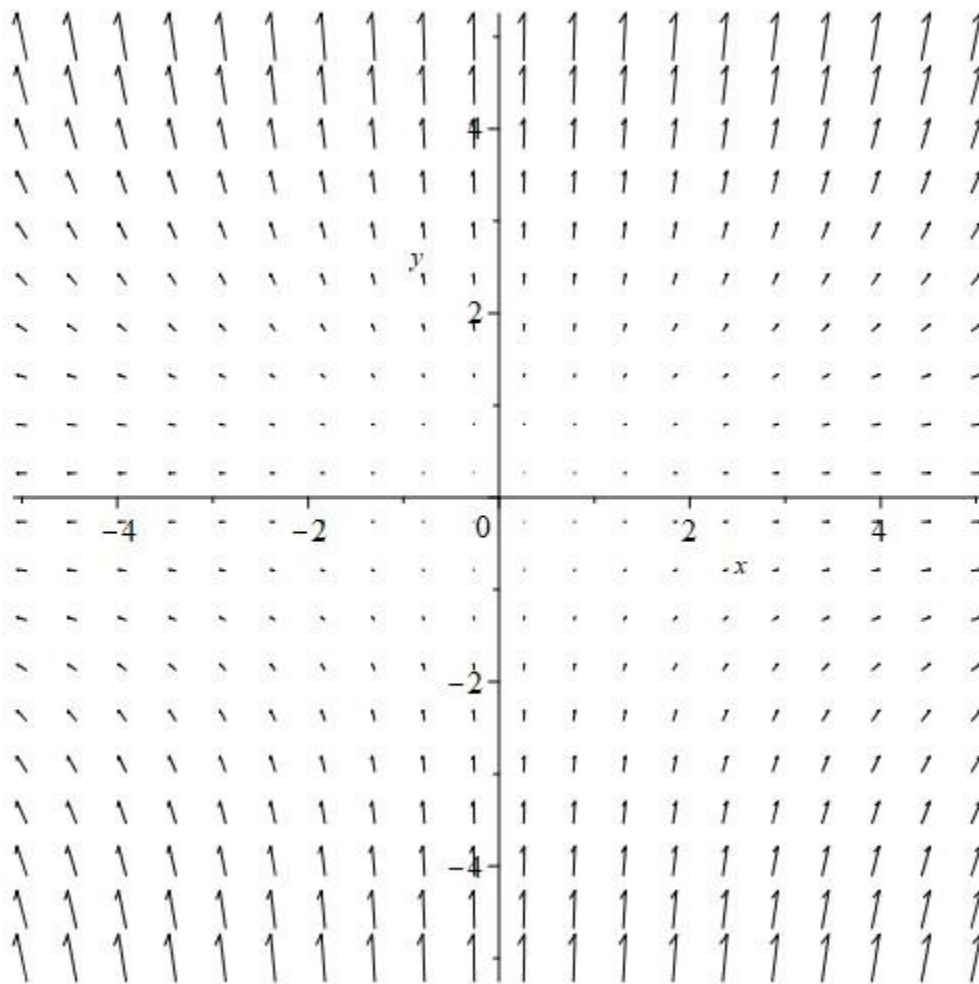# "QUIZ" for Lecture 17

NAME: (print!)Liuyang Shan   **Section:** 24

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

$$\mathbf{F} = (x, y^2) \quad .$$

2. Find a potential function for the vector field **F**

$$\mathbf{F} = (y\cos(xy), x\cos(xy)) \quad .$$
$$\int y\cos(xy)dx = \sin(xy) + g(y)$$
$$x\cos(xy) + g'(y) = x\cos(xy) \rightarrow g'(y) = 0 \rightarrow f(x,y) = x\cos(xy)$$