Quiz for lecture 17.

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Section: 8:40 A.M—10:00 A.M.

1. Sketch the vector planar vector field.
$$F = \langle x, y^2 \rangle.$$
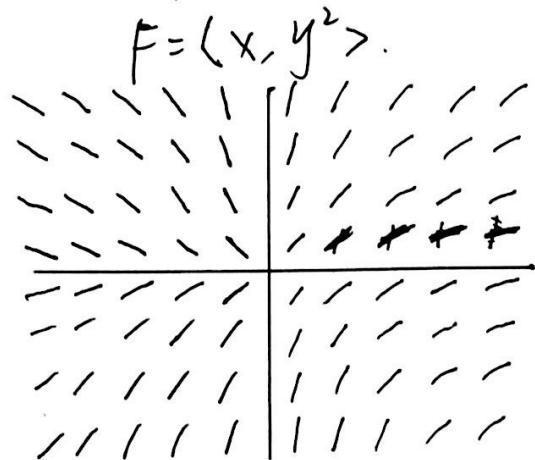


2. Find a potential function for the vector field F.
$$F = \langle y\cos(xy), x\cos(xy) \rangle$$
$$f = \int y\cos(xy)\, dx = \sin(xy) + g(y)$$
$$\int x\cos(xy)\, dy = \sin(xy)$$

∴ The potential function is $\sin(xy)$.