Quiz 12 – MATH 3503 Fall 2022

1. Conservative or not? $\vec{F} = \langle x^2 y, y^4 \rangle$. Justify.

2. Conservative or not? $\vec{F} = \langle 2xy + y^3, x^2 + 3xy^2 \rangle$. Justify.

3. The following vector field is conservative $\vec{F} = \langle y^4, 4xy^3 \rangle$. Find a potential function f so that $\nabla f = \vec{F}$.