

CALCULUS 3 - FALL 2017 - HOMEWORK 4

- 1) Sketch the domain of $\arcsin(x^2 + y^2 - 2)$
- 2) Find the points where $f(x, y) = \frac{xy}{1 + e^{x-y}}$ is continuous
- 3) Find the points where $f(x, y) = \arctan\left(\frac{1}{x+y}\right)^2$ is continuous
- 4) Find the points where $f(x, y, z) = \arcsin(x^2 + y^2 + z^2)$ is continuous
- 5) Find all second partials of $w = \sqrt{u^2 + v^2}$
- 6) How many distinct fourth order partials does $f(x, y, z, t) = \exp[xyz^2t^3]$ have?