EXERCISES OF WEEK SIX (2014/10/12)

We define the function

$$g(x,y) := \begin{cases} \frac{x^2y^2}{x-y} & \text{if } x \neq y \\ 0 & \text{if } x = y. \end{cases}$$

1. Is the function continuous at the point $(0,0)$?
2. is the function differentiable at the point $(1,1)$?
3. is the function differentiable at the point $(0,0)$?

Date: 2014, October 9.