## MAT257 PSET 4—Question 2

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 $\text{Let } g(y) := f(1,y). \text{ Note that } 1^{1^{1^{1^{y}}}} = 1 \text{ and } \log(1) = 0. \text{ Thus, } g(y) = 1 + 0 \cdot \text{other stuff} = 1. \text{ Thus, } D_2 f(1,y) = g'(y) = 0.$