## MATH 243: SECTION 14.3 GROUPWORK

- (1) Calculate  $f_{xy}$  and  $f_{yx}$  for  $f(x,y) = xe^{xy}$  and check they are equal. (2) Calculate all first partial derivatives of the function  $f(x,y,z) = xz \ln(y+yz) + x^2y^2$ . (3) Determine the domain of  $f(x,y) = x^y$  and calculate  $f_{xx}$  and  $f_{yy}$ .