

14.3, number 41: Find all second partial derivatives of

$$f(x, y) = x + y + xy.$$

**Answer:** We compute

$$f_x = 1 + y, \quad f_{xx} = 0, \quad f_{xy} = 1,$$

$$f_y = 1 + x, \quad f_{yx} = 1, \quad \text{and} \quad f_{yy} = 0.$$