

$$f(x, y) = 2xy^6 + x^9y^8 \Rightarrow f_x = 2y^6 + 9x^8y^8, \quad f_{xx} = 72x^7y^8, \quad f_{xy} = 576x^7y^7 \quad \text{and}$$
$$f_y = 12xy^5 + 8x^9y^7, \quad f_{yy} = 60xy^4 + 56x^9y^6, \quad f_{yyy} = 240xy^3 + 336x^9y^5.$$