

## Quiz 9 (Problems)

1. For  $f(x, y) = 3x^4y^2 - x \cos y + 4x^3y^3$ , find  $f_x$ ,  $f_y$ ,  $f_{xx}$  and  $f_{xy}$ .

## Quiz 9 (Answers)

1. (Math-252 Quiz 9)

$$f_x = 12x^3y^2 - \cos y + 12x^2y^3$$

$$f_y = 6x^4y + x \sin y + 12x^3y^2$$

$$f_{xx} = 36x^2y^2 + 24xy^3$$

$$f_{yy} = 6x^4 + x \cos y + 24x^3y$$

$$f_{xy} = 24x^3y + \sin y + 36x^2y^2$$