8.1) FIND THE TWO PARTIAL DERIVATIVES OF

a) $x^2y^3 + x^4y^2$

b) $(x+y)^3$

c) $\sin x \cos y$

a) $\frac{\partial}{\partial x}(x^2y^3 + x^4y^2) = 2xy^3 + 4x^3y^2$

$\frac{\partial}{\partial y}(x^2y^3 + x^4y^2) = 3x^2y^2 + 2x^4y$

b) $\frac{\partial}{\partial x}(x+y)^3 = 3(x+y)^2$

$\frac{\partial}{\partial y}(x+y)^3 = 3(x+y)^2$

c) $\frac{\partial}{\partial x}\sin x \cos y = \cos x \cos y$

$\frac{\partial}{\partial y}\sin x \cos y = -\sin x \sin y$