

(sec 2.6)

Find the first order partial derivatives of the function.

1. $f(x, y) = y^5 - 3xy$

2. $f(x, t) = e^{-t} \cos \pi x$

3. $z = (2x + 3y)^{10}$

4. $f(x, y) = \frac{x - y}{x + y}$

5. $w = \sin \alpha \cos \beta$

6. $f(r, s) = r \ln(r^2 + s^2)$

7. $f(x, y) = x^y$

8. $f(x, y) = \sin^2(mx + ny)$

9. $f(x, t) = \tan(xt)$

10. $f(x, y) = x^4 y^3 + 8x^2 y$