

## ASSIGNMENT 3

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If  $\phi = x^2yz^3 + xy^2z^2$ , write a MATLAB mfile program to determine gradient at point  $P(1, 3, 2)$

Command window

Close all

clc

Syms x,y

Syms z

$$A = (x^2 * y * z^3) + (x * y^2 * z^2)$$

$$u = \text{diff}(A, x)$$

$$v = \text{diff}(A, y)$$

$$w = \text{diff}(A, z)$$

$$x = 1$$

$$y = 3$$

$$z = 2$$

$$u_n = \text{subs}(u)$$

$$v_n = \text{subs}(v)$$

$$w_n = \text{subs}(w)$$