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If  $d = x^2 y z^3 + x y^2 z^2$ , write a matlab mfile program to determine gradient at point  $t(1, 3, 2)$ .

Soln:

1. Command Window
2. close all
3. clc
4. Syms z, y
5. Syms x
6.  $A = (x^2 * y * z^3) + (x * y^2 * z^2)$
7.  $U = \text{diff}(A, x)$
8.  $V = \text{diff}(A, y)$
9.  $W = \text{diff}(A, z)$
10.  $x = 1$
11.  $y = 3$
12.  $z = 2$
13.  $Un = \text{Subs}(u)$
14.  $Vn = \text{Subs}(v)$
15.  $Wn = \text{Subs}(w)$