

Assignment 3

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If $\Phi = x^2y^2 + xy^2z^2$, write a matlab in file program to determine gradient at point $P(1, 3, 2)$

```
1 Command window
2 close all
3 clc
4 Syms x,y
5 Syms z
6 A = (x^2*y*z^2) + (x*y^2*z^2)
7 u = diff(A,x)
8 v = diff(A,y)
9 w = diff(A,z)
10 x = 1
11 y = 3
12 z = 2
13 Un = Subs(u)
14 Vn = Subs(v)
15 Wn = Subs(w)
```