BP 5 – Wed. Nov. 2

1. Give the tangent plane and normal line to the plane for $z = \sqrt{2y - x^2}$ at (1,2).
2. Give the tangent plane to $z = xy + y^2$ at (0,0) and (2,3). Explain the differences of these two planes in terms of z .
3. Give the tangent plane to $w = \ln(9 - x^2 - y^2 - z^2)$ at (0,0,0) and (-1,2,3) Explain the differences of these two planes in terms of the w .