

# QUIZ 7

**Time: 10min**

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1. Find the points on the ellipsoid  $x^2 + 2y^2 + 3z^2 = 1$  where the tangent plane is parallel to the plane  $3x - y + 3z = 1$ .
2. Find maximum and minimum values of  $f(x, y) = x^2 + y^2$  subject to the constraint  $x^4 + y^4 = 1$ .

*Each problem is worth 5 pts.*