1. Find equations of the normal and osculating planes at the given point.
   
   (a) $x = 2 \sin 3t, y = t, z = 2 \cos 3t$ at $(0, \pi, -2)$
   (b) $x = t, y = t^2, z = t^3$ at $(1, 1, 1)$

2. Find the normal and tangential components of acceleration.
   
   (a) $r(t) = <3t - t^3, 3t^2, 0>$
   (b) $r(t) = <e^t, \sqrt{2}t, e^{-t}>$