1. Given a curve with parametric equations \( x = 3t \sin t, y = 3t \cos t \) and \( z = 2t^2 \), find the arc length from \( t = 0 \) to \( t = 4/5 \).

2. Given a curve \( \mathbf{r}(t) = (t, t^2, t^3) \), find the unit tangent vector and unit normal vector of the curve at \((1, 1, 1)\).