PHYS 703 Homework Problem

1. The upper half of a spherical surface of radius 2m and centered at the origin, i.e., the region with $0 \leq \theta \leq \pi/2$, has an electric dipole moment density given by $D(\vec{x}') = D_0 \cos\theta'$, where D_0 is 3 C/m. Find the electric potential due to $D(\vec{x}')$ at the two points specified by $r = 5$m, $\phi = 30°$, and $\theta = \pi/2 \pm \pi/4$.