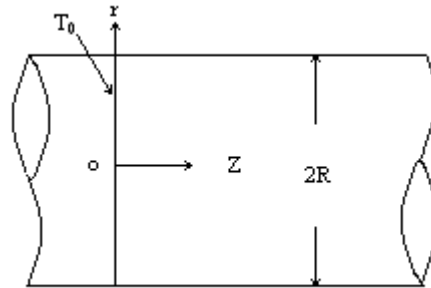


1. A semi-infinite solid cylinder of radius R and thermal conductivity of k is exposed to ambient temperature of T_∞ . The cylinder base temperature is T_0 . Find steady state two dimensional temperature distribution, $T(r, z)$, for following cases :

- (a) Heat transfer coefficient is large.
- (b) Heat transfer coefficient is finite, h .



2. Consider a long rod of radius r_0 whose its cross section is semicircle. The surface temperature at $r=r_0$ is $f(\theta)$ and the temperature of the lower surface is T_0 . Find the steady state temperature distribution of the rod, $T(r, \theta)$.

