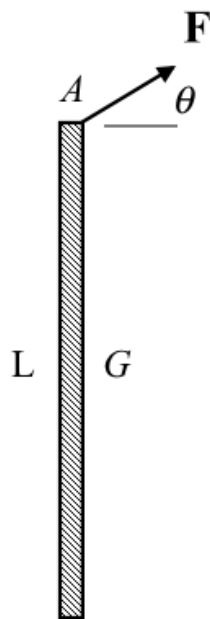**Homework H.5.C**

Given: A uniform slender rod is at rest upon a frictionless horizontal surface when a force F is applied in the direction shown. Assume that the rod has mass m and length of L.

Find:
(a) Determine the acceleration of the rod's center of mass G; and
(b) Determing the rod's angular acceleration.

Use the following parameters in your analysis: $\theta = 30°$, $mg = 5$ lb, $F = 20$ lb and $L = 3$ ft.