1. At the instant shown, the disk is rotating with an angular velocity of 3 rad/s and an angular acceleration of 8 rad/s$^2$, both cw. Determine the angular acceleration of link AB and the acceleration of the piston at this instant.

   (Ans. $a_B = 2.64 \text{ m/s}^2$ to the right)

2. At a given instant, the gear racks have the velocities and accelerations shown. Determine the acceleration of points A and B.

   (Ans. $\vec{a}_A = -0.5 \hat{j} \text{ ft/s}^2$, $\vec{a}_B = -2.5 \hat{i} + 63.5 \hat{j} \text{ ft/s}^2$)