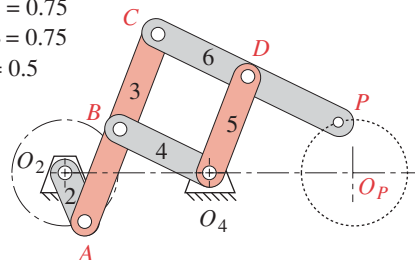


(a) Chebyshev approximate circle-tracing fourbar

$$\begin{aligned}
 AB &= BC = CD = DP = BO_4 = DO_4 = 1.0 \\
 O_2O_4 &= 0.75 \\
 O_4O_P &= 0.75 \\
 AO_2 &= 0.5
 \end{aligned}$$



(b) Delone exact circle-tracing sixbar

FIGURE 3-37

Circle generating mechanisms (Source: Artobolevsky ⁽²⁰⁾ Vol 1, pp. 450-451)

- †6-80 Write a computer program or use an equation solver such as *Mathcad*, *Matlab*, or *TKSolver* to calculate and plot magnitude and direction of the velocity of point *P* in Figure 3-37a as a function of θ_2 . Also calculate and plot the velocity of point *P* versus point *A*.
- †6-81 Calculate the percent error of the deviation from a perfect circle for the path of point *P* in Figure 3-37a.
- †6-82 Write a computer program or use an equation solver such as *Mathcad*, *Matlab*, or *TKSolver* to calculate and plot the angular velocity of link 8 in the linkage of Figure 3-37b as a function of θ_2 for a constant $\omega_2 = 1$ rad/sec CCW.