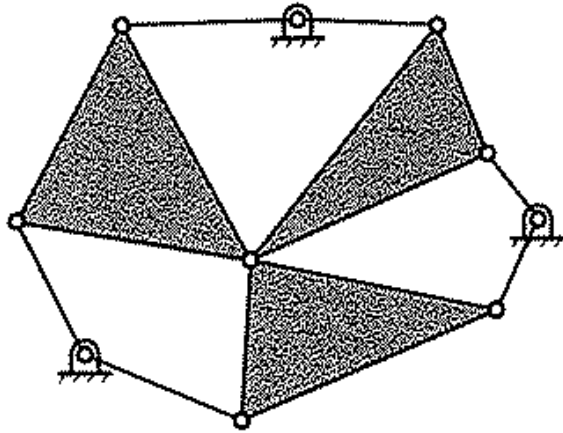
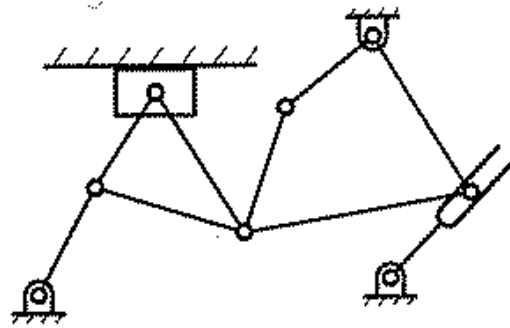


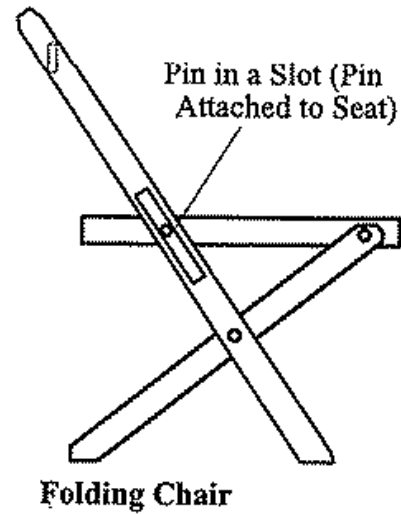
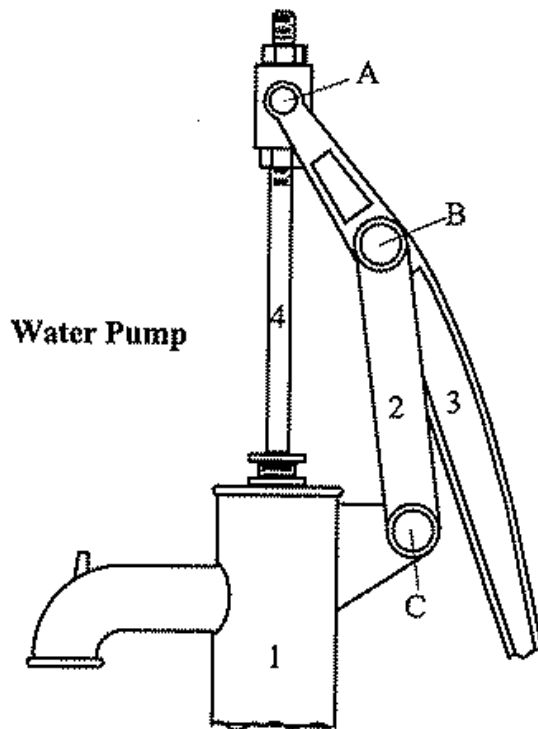
1.10 Determine the mobility and the number of idle degrees of freedom of the linkages shown. Show the equations used and identify any assumptions made when determining your answers.



(a)

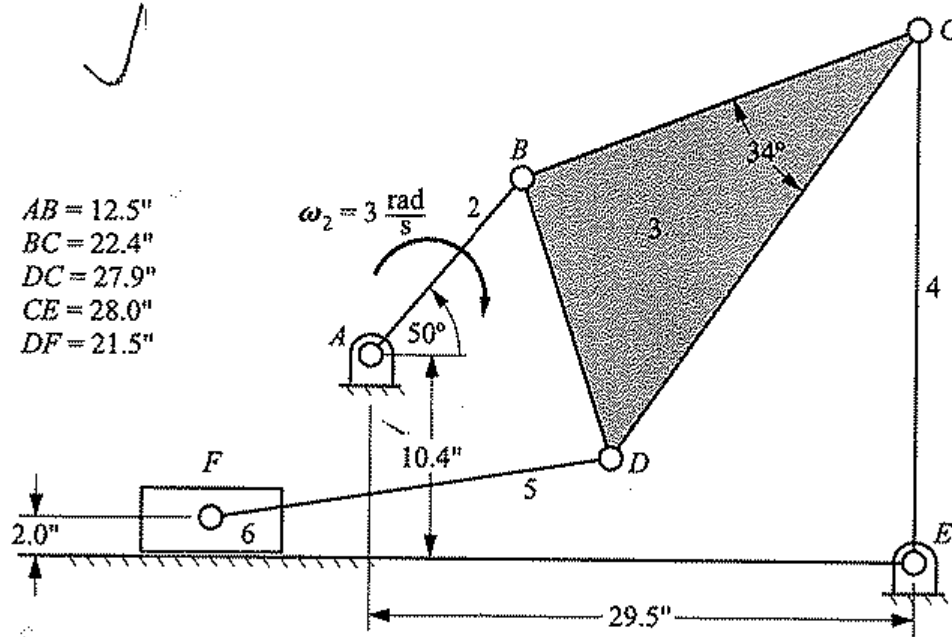


(b)



Folding Chair

2.23 In the mechanism shown, determine the sliding velocity of link 6 and the angular velocities of links 3 and 5.



2.22 The linkage shown is used to raise the fabric roof on convertible automobiles. The dimensions are given as shown. Link 2 is driven by a DC motor through a gear reduction. If the angular velocity $\omega_2 = 2 \text{ rad/s}$ CCW, determine the linear velocity of point J , which is the point where the linkage connects to the automobile near the windshield.

