

You are given a set of five links with the following lengths: 2.0 in, 4.0 in, 5.0 in, 6.0 in, and 9.0 in.

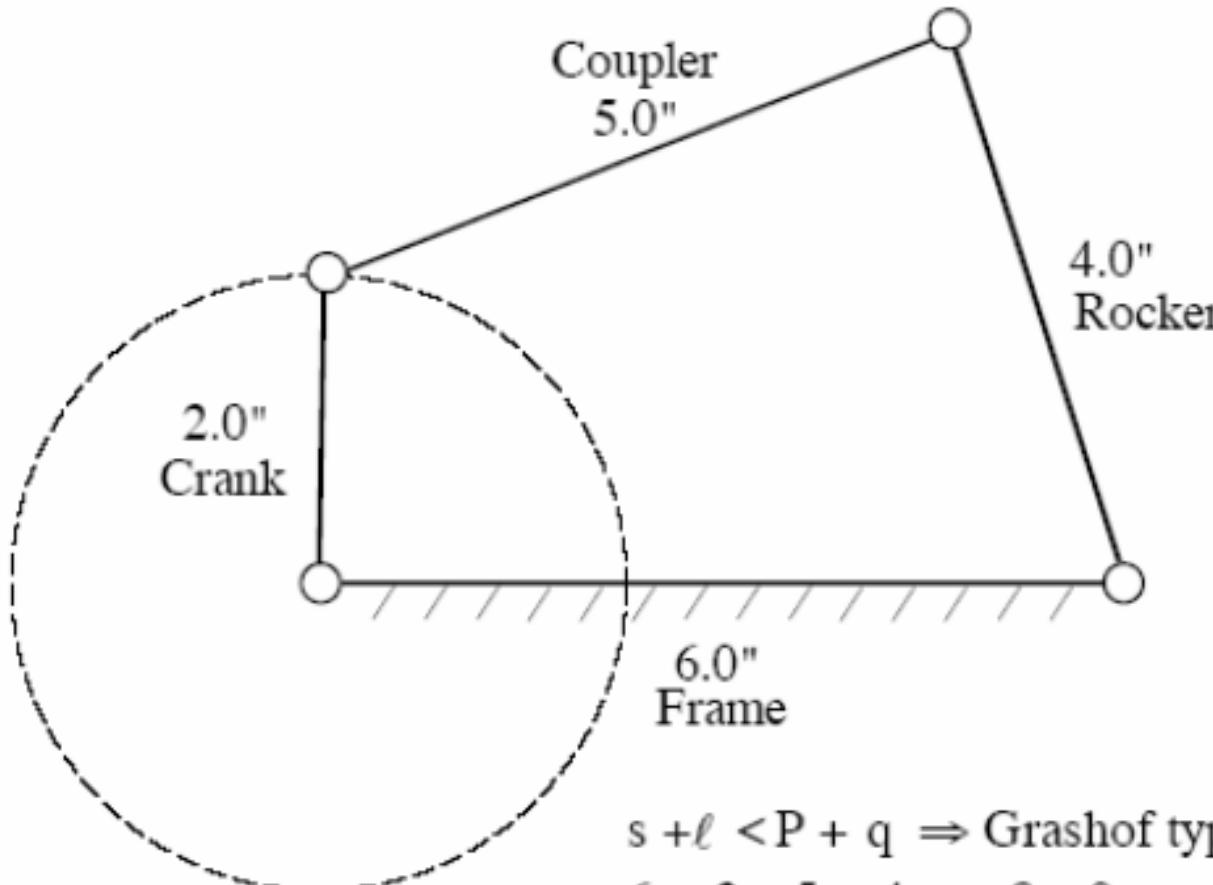
Design a 4-bar mechanism that can be driven by continuously rotating motor.

Make a drawing of the mechanism and name all links. Name also the mechanism.

Show your calculations.

### Problem 1.31

Assume that you have a set of links of the following lengths: 2 in, 4 in, 5 in, 6 in, 9 in. Design a 4-bar linkage that can be driven with a continuously rotating electric motor. Justify your answer with appropriate equations, and make a scaled drawing of the linkage. Label the crank, frame, coupler and rocker (follower).



$$s + \ell < P + q \Rightarrow \text{Grashof type 1}$$

$$6 + 2 < 5 + 4 \Rightarrow 8 < 9$$

Therefore the linkage is a type 1 linkage and a crank rocker