

You are given a set of three links with lengths 2.4 in, 7.2 in, and 3.4 in.

What is the length of the Fourth link so that the mechanism 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 1.34

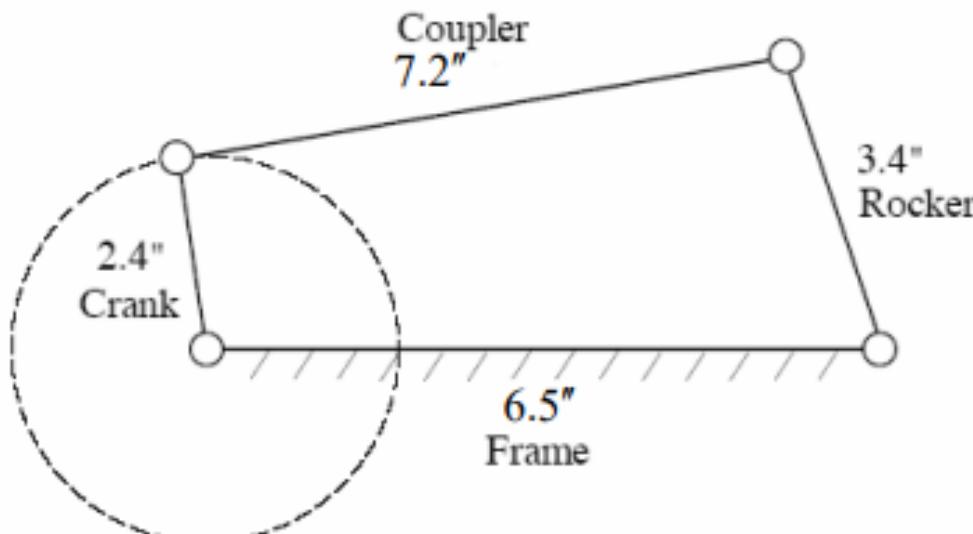
You are given a set of three links with lengths 2.4 in, 7.2 in, and 3.4 in. Select the length of a fourth link and assemble a linkage that can be driven by a continuously rotating motor. Is your linkage a Grashof type 1 or Grashof type 2 linkage? (Show your work.) Is it a crank-rocker, double-rocker, or double-crank linkage? Why?

Let: $\ell = 7.2$ in

$s = 2.4$ in

$p = 3.4$ in

$q = x$ in



$$s + \ell < p + q \Rightarrow \text{Grashof type 1 linkage}$$
$$2.4 + 7.2 < 3.4 + x$$
$$\text{i.e. } x > 6.2$$