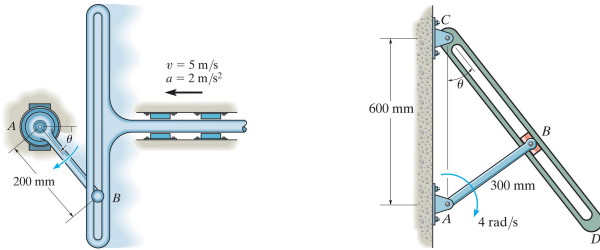


16.4 Absolute Motion Analysis

If the geometry is simple, velocity and acceleration of a rigid body can be found using an **absolute motion analysis**.

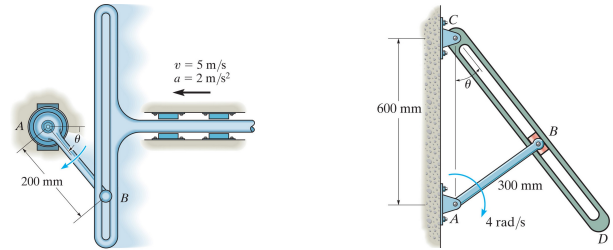


1

16.4 Absolute Motion Analysis

Relate the positions and angles in the problem, then take derivatives.

"scotch yoke" (see video)



2

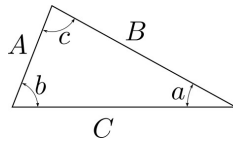
16.4 Absolute Motion Analysis

Laws of Sines and Cosines may be useful:

$$\frac{A}{\sin a} = \frac{B}{\sin b} = \frac{C}{\sin c}$$

(careful with angles $> 90^\circ$)

$$C^2 = A^2 + B^2 - 2AB \cos c$$



3