Homework 2.E

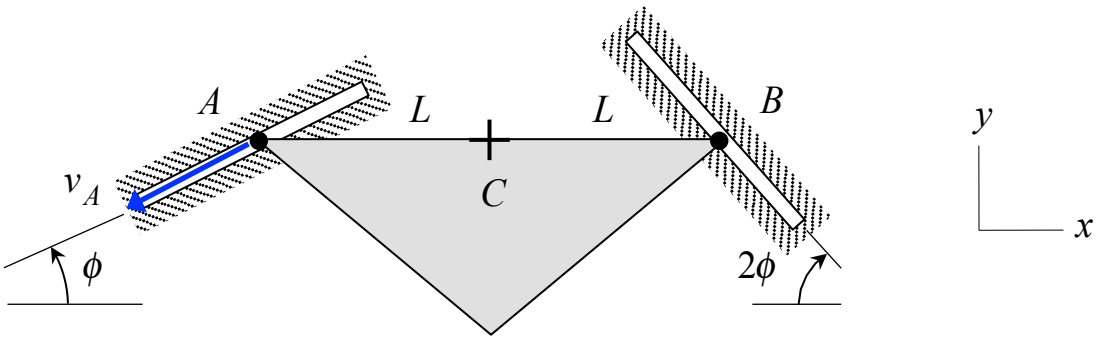
Given: The triangular plate is supported by two pin-in-slot joints at corners A and B. Corner A moves down and to the left with a constant speed of v_A. At the position shown, edge AB of the plate is horizontal.

Find: For this position:

(a) Determine the angular velocity of the plate.

(b) Determine the velocity of point C, where C is midway between points A and B on edge AB of the plate.

Write your answers as vectors.



Use the following parameters in your analysis: $L = 2$ ft, $v_A = 15$ ft/s and $\phi = 30°$.