1) Develop a SolidWorks (SW) kinematic simulation for the four bar shown below with crank link 2 rotating at constant 30 rpm CCW. Attach a screen shot of your mechanism. Create three MATLAB graphs from your results. Be certain to start each plot at 2 = 0°. Do not plot -180° ≤ 2 ≤ 180°.

 a)  [deg] as a function of  [deg] (only one full revolution)

 b)  [rad/sec] as a function of  [deg] (only one full revolution)

 c)  [rad/sec2] as a function of  [deg] (only one full revolution)

2) Use simple trigonometry to determine  and  and compare to SW values. Show your work.

trig  \_\_\_\_\_\_\_\_\_\_ trig  \_\_\_\_\_\_\_\_\_\_

SW  \_\_\_\_\_\_\_\_\_\_ SW  \_\_\_\_\_\_\_\_\_\_

3) Explicitly verify your SW results and provide documentation including screen plots and hardcopy of code.

**C**

**B**

**3**

**4**

AD = 13 in

AB = 4 in

BC = 15 in

CD = 20 in

**2**

**A**

**D**

**1**

**1**

**4**

**2**