HW# 7: Get scaled printouts from DVD

P3.13 For the mechanism shown in Figure P3.13

(a) draw the velocity polygon (employ scale: 1 in = 10 in/sec)

(b) specify

(i)  the velocity of point B
(ii)  the velocity of point C
(iii) the velocity of point D

(iv) the angular velocity of link 3
(v)  the angular velocity of link 4

\[ r_{O_2 B} = 1.5 \text{ in}; \quad r_{BD} = 3.0 \text{ in} \]
\[ r_{O_2 O_4} = 4.0 \text{ in}; \quad r_{O_4 D} = 2.5 \text{ in} \]
\[ r_{BC} = 3.5 \text{ in}; \quad r_{CD} = 1.0 \text{ in} \]
\[ \theta_2 = 60^\circ; \quad \dot{\theta}_2 = 140 \text{ rpm CW} \]
P3.29 For the mechanism shown in Figure P3.29

(a) draw the velocity polygon (employ scale: 1 cm = 10 cm/sec)
(b) specify
(i) the velocity of point G
(ii) the angular velocity of link 5

\[ r_{O2B} = 4.0 \text{ cm}; \quad r_{BC} = 4.0 \text{ cm} \]
\[ r_{BD} = 10.0 \text{ cm}; \quad r_{CE5} = 6.0 \text{ cm} \]
\[ r_{CG} = 9.0 \text{ cm} \]
\[ \theta_2 = 30^\circ \]
\[ \dot{\theta}_2 = 160 \text{ rpm CCW} \]