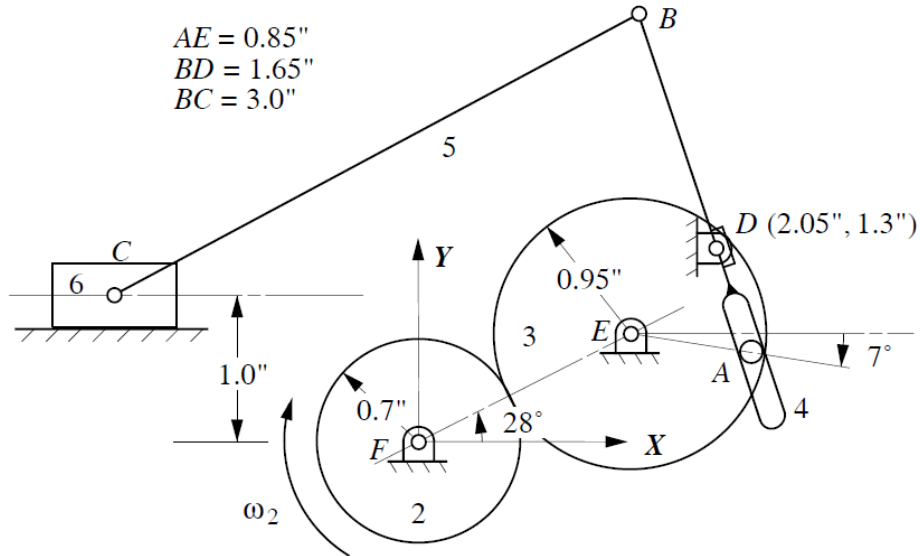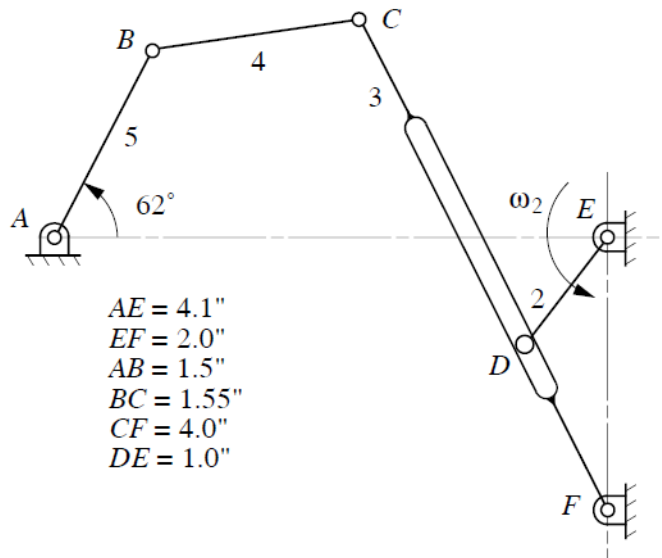## Problem 4.11

Find the velocity of point C given that the angular velocity of gear 2 is 10 rad/s CW. B is a pin joint connecting links 4 and 5 . Point A is a pin in link 3 that engages a slot in link 4.

$AE = 0.85"$
$BD = 1.65"$
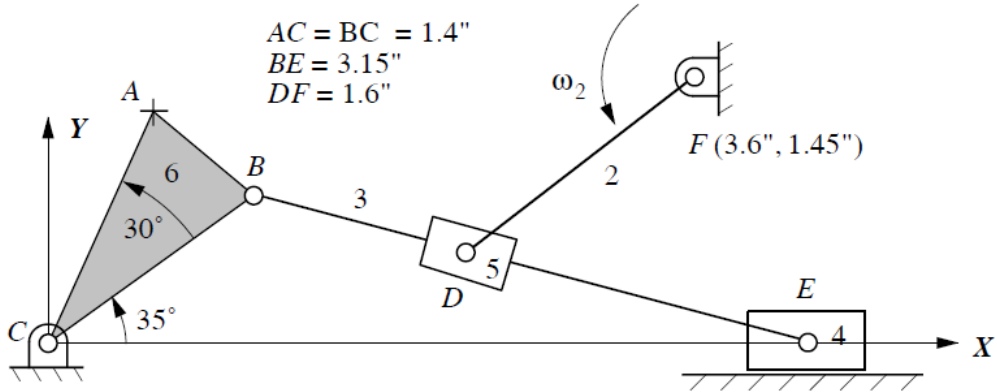$BC = 3.0"$

D (2.05", 1.3")

0.95"

1.0"

0.7"

28°

ω_2

Problem 4.12

If ω_2 = 5 rad/s CCW, find ω_5 using instant centers.

62°

$AE = 4.1"$
$EF = 2.0"$
$AB = 1.5"$
$BC = 1.55"$
$CF = 4.0"$
$DE = 1.0"$

ω_2

Problem 4.13

If ω_2 = 1 rad/s CCW, find the velocity of point A on link 6 using the instant center method. Show v_{A6} on the drawing.

$AC = BC = 1.4"$
$BE = 3.15"$
$DF = 1.6"$

ω_2

$F(3.6", 1.45")$

Problem 4.25

Assume that link 7 rolls on link 3 without slipping, and find the following instant centers: I_{13}, I_{15}, and I_{27}. For the given value for ω_2, find ω_7 using instant centers.

$AB = 1.8"$
$BG = 0.85"$
$GF = 1.7"$
$BD = 3.9"$
$DE = 3.25"$
$AE = 2.0"$

$F(-2.0", 0.95")$

$\omega_2 = 2$ rad/s