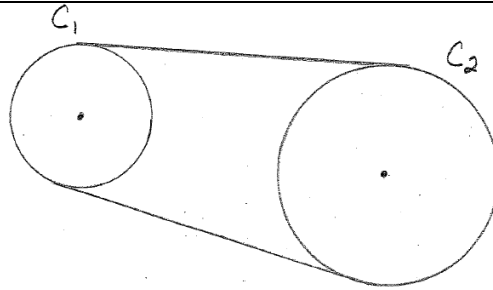
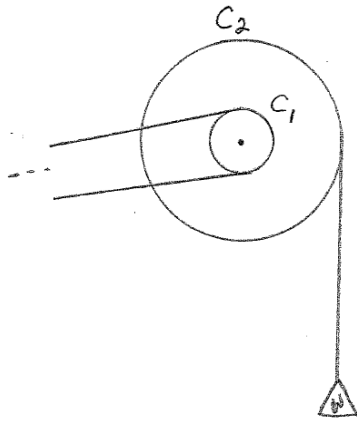


1. GEARS C_1 AND C_2 ARE CONNECTED BY A CHAIN, GEAR C_1 HAS A RADIUS OF 11.8cm , AND C_2 HAS A RADIUS OF 23.2cm . IF C_1 ROTATES THROUGH AN ANGLE OF 137.2° , THROUGH WHAT ANGLE DOES GEAR C_2 ROTATE? EXPRESS YOUR ANSWER IN DEGREES; ROUND TO TWO DECIMAL PLACES.



2. . GEARS C_1 AND C_2 ARE FIXED TOGETHER SO THAT THEY ROTATE TOGETHER. A CHAIN CONNECTED TO A MOTOR (NOT PICTURED) CAUSES THE GEARS TO ROTATE, LIFTING WEIGHT W . IF C_1 HAS A RADIUS OF 5.7cm AND C_2 HAS A RADIUS OF 17.8cm , WHEN 52.5cm OF CHAIN FEEDS INTO GEAR C_1 , HOW HIGH IS THE WEIGHT LIFTED?



3. GEARS C_1 , C_2 , AND C_3 ARE ARRANGED AS SHOWN SO THAT C_1 CAUSES C_2 , AND C_3 TO ROTATE (C_2 , AND C_3 HAVE THE SAME CENTER) AND THE WEIGHT IS LIFTED. SUPPOSE C_1 HAS A RADIUS OF 25.7cm AND C_2 HAS A RADIUS OF 9.8cm . WHEN C_1 ROTATES ONE HALF OF A REVOLUTION THE WEIGHT IS LIFTED 131cm . WHAT IS THE RADIUS OF C_3 ?

