Military Institute of Science and Technology
Department of Civil Engineering
Practical Surveying: CE-104 & EWCE-104
Simple Curve Setting (22 Feb 2024)

Field Work Assignment:

Calculate the necessary data and set the circular curve in field using Rankine's Method of Tangential Angle. The data are as follows:

Group No	1	2	3	4	5	6	7	8
Radius (ft)	300	305	310	315	320	325	330	335
Δ (deg)	30	29	28	27	26	25	24	23
V (ft/s)	20	22	24	26	28	30	32	34

Given:

Chainage at Point of Intersection is 1000.00 ft
Length of Chain is 100 ft.
Circular Curve Full Chord Length (Peg Interval) is 20 ft.
Width of the road is 20 ft.
Find also the corresponding super-elevation for each peg points of circular curve.

		Deflection Angle (As Calculated)			Deflection Angle (For Theodolite)		
		Deg	Min	Sec	Deg	Min	Sec
$\triangle_1$	δ_1						
$\triangle_2$	$\triangle_1 + \delta_2$						
$\triangle_3$	$\triangle_2 + \delta_3$						
$\triangle_n$	$\triangle_{n-1} + \delta_n$						

Calculation Check: $\triangle_n = \triangle/2$