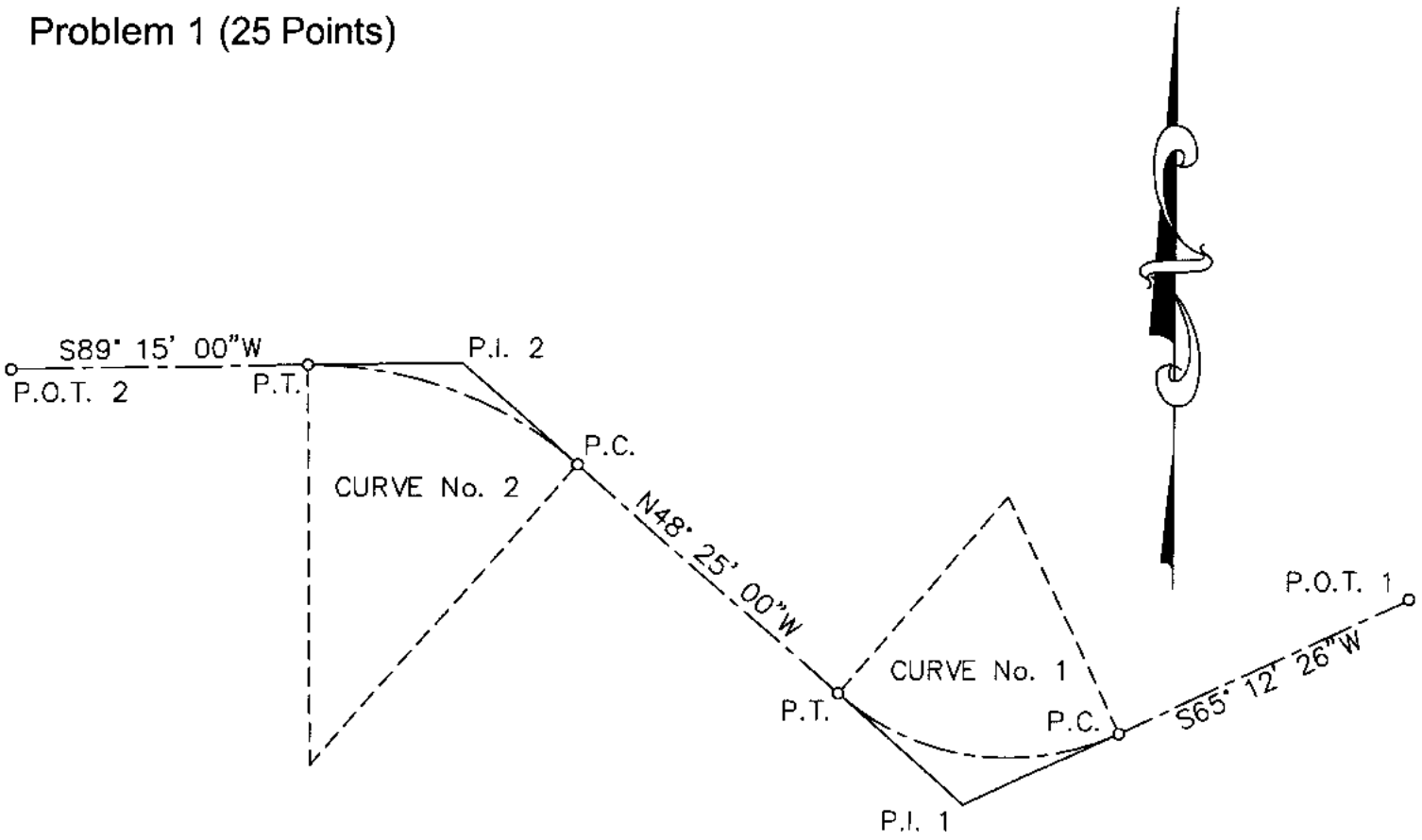
Problem 1 (25 Points)



GIVEN THE FOLLOWING BASELINE INFORMATION:

P.O.T. 1 = STA. 50+67.12
P.O.T. 1 TO P.I.1 = 920.00'
P.I. 1 TO P.I. 2 = 1300.00'
P.I. 2 TO P.O.T. 2 = 842.31'

CURVE No. 1
D_C = 12° 00' 00"

CURVE No. 2
R = 750.00'

SOLVE THE FOLLOWING:

CURVE No 1

P.C. STA. =

P.T. STA. =

L =

T =

R =

CURVE No 2

P.C. STA. =

P.T. STA. =

L =

T =

D_C =

P.O.T. 2 STA. =

Problem 2 (15 Points)

GIVEN THE FOLLOWING CENTER LINE CURVE DATA:

$\Delta = 12^\circ\ 30'\ 00''$
$D_C = 3^\circ\ 30'\ 00''$

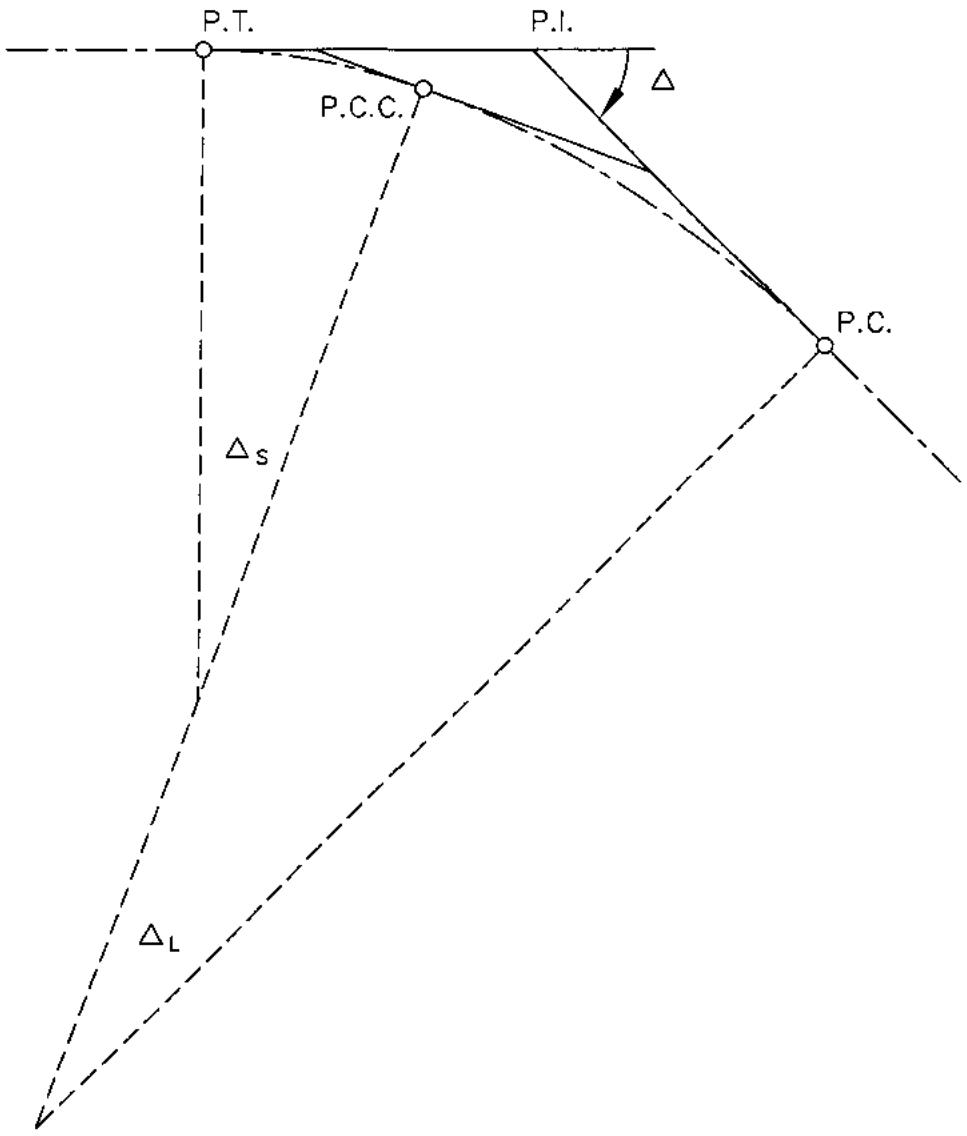
CALCULATE THE CURVE STAKEOUT INFORMATION FOR HALF (50') STATIONS AT 17.5' LEFT (OUTSIDE) OF THE CURVE CENTER LINE. INCLUDE LONG & SHORT CHORDS. ASSUME THAT YOU WILL OCCUPY THE OFFSET P.C. AND BACKSIGHT THE OFFSET P.I.

STATION	L	d/2	L.C.	S.C.
P.C. 57+25.67				

Problem 3 (20 Points)

GIVEN THE FOLLOWING COMPOUND CURVE:

Δ_L = 29° 30' 00"
Δ_S = 43° 00' 00"
R_S = 675.00'
D_C = 5° 00' 00" (For R_L)
P.I. STA. = 12+75.00



SOLVE FOR:

T_L =

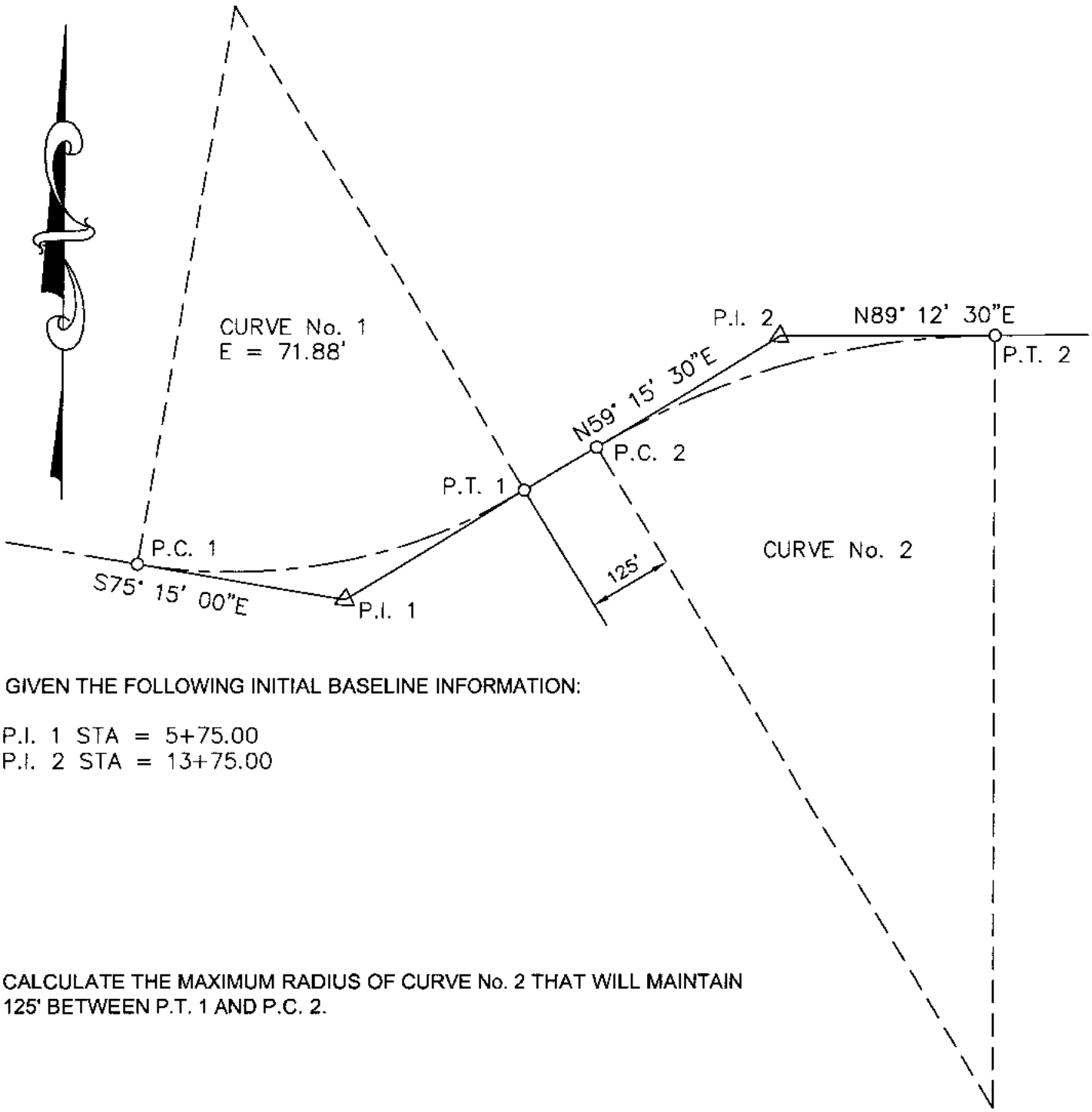
Δ =

R_L =

P.C.C. STA. =

P.T. STA. =

Problem 4 (20 Points)



GIVEN THE FOLLOWING INITIAL BASELINE INFORMATION:

P.I. 1 STA = 5+75.00
P.I. 2 STA = 13+75.00

CALCULATE THE MAXIMUM RADIUS OF CURVE No. 2 THAT WILL MAINTAIN 125' BETWEEN P.T. 1 AND P.C. 2.

Problem 5 (20 Points)

For the alignment shown below, determine the station and offset of Point A and the Northing and Easting values of Point B.