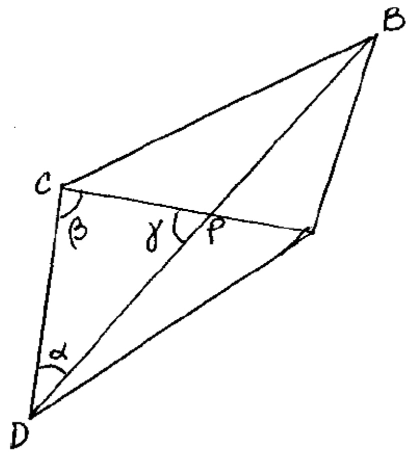
Una finca en forma de cuadrilátero , tiene de coordenadas de los extremos, los siguientes valores : (680; 720), B (715 ; 920), C (450 ; 780), y D (500 ; 520). Determinar la longitud de los lados d la finca y el valor de las coordenadas del punto donde se cortan sus diagonales.



$$\overline{AB} = \sqrt{\left(X_B - X_A\right)^2 + \left(Y_B - Y_A\right)^2} = 203,04\,m$$
$$\overline{AD} = \sqrt{\left(X_D - X_A\right)^2 + \left(Y_D - Y_A\right)^2} = 269,07\,m$$
$$\overline{DC} = \sqrt{\left(X_C - X_D\right)^2 + \left(Y_C - Y_D\right)^2} = 264,76\,m$$
$$\overline{DB} = \sqrt{\left(X_B - X_D\right)^2 + \left(Y_B - Y_D\right)^2} = 454,12\,m$$
$$\overline{CB} = \sqrt{\left(X_B - X_C\right)^2 + \left(Y_B - Y_C\right)^2} = 299,70\,m$$
$$\overline{CA} = \sqrt{\left(X_A - X_C\right)^2 + \left(Y_A - Y_C\right)^2} = 237,70\,m$$

$$\theta_C^D = arctg\frac{X_D - X_C}{Y_D - Y_C} = arctg\frac{500-450}{520-780}\left(2^{o}\,C\right) = 187,904^g$$
$$\theta_C^A = arctg\frac{X_A - X_C}{Y_A - Y_C} = arctg\frac{230}{-60}\left(2^{o}\,C\right) = 116,245^g$$
$$\theta_D^B = arctg\frac{X_B - X_D}{Y_B - Y_D} = arctg\frac{215}{400} = 31,3978^g$$

$$\alpha = \theta_D^B - \theta_D^C = 31,3975 - 387,9049 + 400 = 43,4929^g$$
$$\beta = \theta_C^D - \theta_C^A = 187,9049 - 116,2454 = 71,6595^g$$
$$\gamma = 200 - (\alpha + \beta) = 84,8476^g$$

$$\frac{\overline{CD}}{sen\gamma} = \frac{\overline{CP}}{sen\alpha} \qquad \overline{CP} = 171,98$$

$$X_P = X_C + \overline{CP}\, sen\, \theta_C^A = 616,41\, m$$
$$Y_P = Y_C + \overline{CP} \cos \theta_C^A = 736,59\, m$$