

Test for Collinear Points in the xy -Plane

Three points (x_1, y_1) , (x_2, y_2) and (x_3, y_3) are collinear if and only if

$$\det \begin{bmatrix} x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \\ x_3 & y_3 & 1 \end{bmatrix} = 0$$