



Problem:

Using the method of isocline make the approximate family of integral curves of the equation $y' = x + y$.

Solution:

The isoclines of this equation are the lines the equations of which are $x + y = k$. For some values of k , e.g. $k = 0, \pm 1, \pm 2$, we draw the isoclines $x + y = k$. They are straight lines. Each isocline of $x + y = k$ is crossed by short segments at the angle α , $\tan \alpha = k$, to the axis OX , not reaching other isoclines. Let's draw the integral curves, e.g., through the points $(0,0)$, $(1,-1)$, $(-1,1)$, $(2,-2)$, matching with the directions of the segments on isoclines.

The obtained figure gives a general idea on the solutions of the equation $y' = x + y$.

