

# 2D Translation Algorithm

Let-

Initial coordinates of the object  $O = (X_{old}, Y_{old})$

New coordinates of the object  $O$  after translation =  $(X_{new}, Y_{new})$

Translation vector or Shift vector =  $(T_x, T_y)$

Given a Translation vector  $(T_x, T_y)$ -

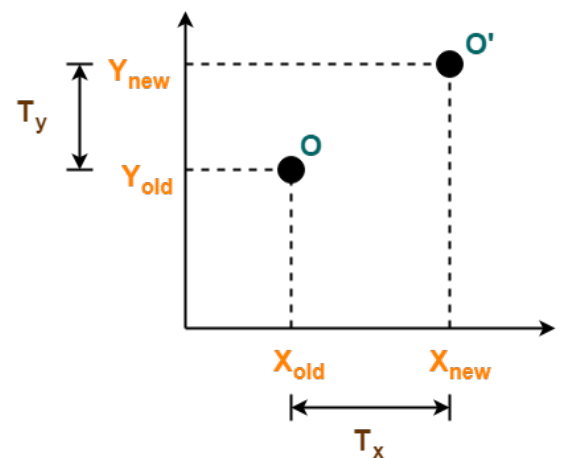
$T_x$  defines the distance the  $X_{old}$  coordinate has to be moved.

$T_y$  defines the distance the  $Y_{old}$  coordinate has to be moved.

This translation is achieved by adding the translation coordinates to the old coordinates of the object as-

$X_{new} = X_{old} + T_x$  (This denotes translation towards X axis)

$Y_{new} = Y_{old} + T_y$  (This denotes translation towards Y axis)



2D Translation in Computer Graphics