8 CLESMATE PRA 3 WAL SUNDAR, 100 12 1092 | Date 30 08 2023 AUGMENTED& VIRTUAL REALITY ASSIGNMENT: TRANSFOR MATION Apply the following transformation for a towargle with co-ordinates: (2,2) (4,2) (3,3) @ Townslate the towardle with (5,5) as the terenslateon factor. [x y] = [x y] + [tx ty] A [2 y'] = [2 2] + [5 5] = [7 7] B [x' y'] = [42] + [55] = [97] C [x' y'] = [33] + [55] = [88] (8, 7) (9,7) (8,8) Apply rotation by 145° [x y] = [x y] [coso +smo] -smo coso A [x' y'] = [22] 1/52 1/52 7 [0 515] [x' y'] = [4 2] 1/52 [1] = /2[26]

Q1)

= [ 52 352 ]

3401/2103

$$\begin{bmatrix} x', y', \frac{1}{3} = \begin{bmatrix} 3 & \frac{3}{3} \end{bmatrix} & \begin{bmatrix} 1 & 1 & \frac{1}{3} \end{bmatrix} & \frac{1}{3} & \frac{1}$$

Θ Apply notation by  $45^{\circ}$  on (2,2)  $[x^2-h y^2-K] = [x-h y-k][\cos \theta \sin \theta]$   $[-\sin \theta \cos \theta]$ 

A 
$$\begin{bmatrix} x'-2 & y'-2 \end{bmatrix} = \begin{bmatrix} 2-2 & 2-2 \end{bmatrix} \begin{bmatrix} 1/52 & 1/52 \\ -1/52 & 1/52 \end{bmatrix}$$

$$\begin{bmatrix} x'-2 & y'-2 \end{bmatrix} = \begin{bmatrix} 0 & 0 \end{bmatrix} \begin{bmatrix} 1 & 1 \\ 2 & 2 \end{bmatrix} \begin{bmatrix} 2 & 2 \\ 2 & 2 \end{bmatrix} \begin{bmatrix} 2 & 2 \\ 2 & 2 \end{bmatrix}$$

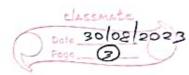
$$\begin{bmatrix} x'-2 & y'-2 \end{bmatrix} = \begin{bmatrix} 4-2 & 4-2 \end{bmatrix} \begin{bmatrix} 1 & 1 \\ 2 & 2 \end{bmatrix} \begin{bmatrix} 2 & 2 \\ 2 & 2 \end{bmatrix}$$

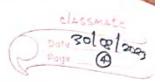
$$\begin{bmatrix} x'-2 & y'-2 \end{bmatrix} = \begin{bmatrix} 1/2 & 6/2 \end{bmatrix}$$

$$\begin{bmatrix} x'-2 & y'-2 \end{bmatrix} = \begin{bmatrix} 1/2 & 6/2 \end{bmatrix}$$

$$\begin{bmatrix} x'-2 & y'-2 \end{bmatrix} = \begin{bmatrix} 1/2 & 6/2 \end{bmatrix}$$

$$\begin{bmatrix} 2+52 & 652+2 \end{bmatrix}$$





$\Theta$	consider an object ABC with coordinate
	A(1,1) B(10,1) and c(5,5).
	Rotate the olige ct by 90° on counter
	clockwess dilection and give the coordinate
	of the teamsformed object.
	Rotating by 90°
8	[2'y] = [ x y ] [ 0 1] = [-y x]
in we	$(1,1) \rightarrow (-1,1)$
	(10,1) -> (-5,10)
-	$ (5,5) \rightarrow (-5,5) $ $ (5,5) \rightarrow (-5,5) $
_	
(5)	consider as DABC whose cooldinates are
7	A(4,1) B(9,2) c(4,3)
	@ reflect given & about the x asus
	(×, y) → (x, -y)
	(4) (点型)
	0 000
	B reflect given a about the yang $(x,y) \rightarrow (-x,y)$
	A. C.
	(-4,1) (-5,2) (-4,3)