	SRM Institute of Science and Technology Kattankulathur	
	DEPARTMENT OF MEATHEMATICS	
	18MAB102T ADVANCED CALCULUS & COMPLEX ANALYSIS	
	UNIT –IV Mapping and Bilinear Transformation	
Sl.No.	**Tutorial Sheet -3**	**Answers**
	Part – A	
1	Find the images of the $\|z+1\|=1$ where the map $w=\frac{1}{z}$	$u=-\frac{1}{2}$
2	Find the images of the $\|z-2i\|=2$ where the map $w=\frac{1}{z}$	$v=-\frac{1}{4}$
3	Describe about w=$\frac{1}{z}$ transformation.	
4	Define Bilinear Transformation	
	Part – B	
5	Find the bilinear map which maps the points $z=1,i,-1$ onto the points $w=i,0,-i$	$\frac{-z+i}{z+i}$
6	Find the bilinear map which maps the points $z=\infty,i,0$ onto the points $w=0,-i,\infty$	$\frac{1}{z}$
7	Find the bilinear map which maps the points $z=0,1,\infty$ onto the points $w = i$, 1, -i	$\frac{z+i}{1+iz}$