Name	_ Date	_Geometry
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# Compositions of Transformations Carousel Activity

[Group - 25 minutes total; Presentation – 10 minutes]

#### Station 1

Given  $\Delta$ TRY with vertices T(-2, 3), R(3, 6), Y(1, -1)

- a) Perform the composition of transformations  $r_{x-axis}{}^{\mathrm{o}}R_{90^{\mathrm{o}}}$
- b) State the single transformation equivalent to the above composition of transformations Station 2

Given  $\Delta$ CAT with vertices C(-5, 3), A(2, 6), T(7, 1)

- a) Perform the composition of transformations  $R_{90^{\circ}} {}^{\circ} r_{v=x}$
- b) State the single transformation equivalent to the above composition of transformations Station 3

Given  $\triangle DOG$  with vertices D(1, 2), O(5, 7), G(8, 4)

- a) Perform the composition of transformations  $r_{x-axis}{}^{\circ}r_{y=x}$
- b) State the single transformation equivalent to the above composition of transformations Station 4

Given  $\triangle$ ELF with vertices E(1, -5), L(6, -4), F(3, -1)

- a) Perform the composition of transformations  $R_{180^{\circ}}{}^{\circ}R_{270^{\circ}}$
- b) State the single transformation equivalent to the above composition of transformations

#### Instructions per station

Round 1: List the order of transformations to be performed [2 minutes]

Round 2: Perform the first transformation. Graph and state the coordinates

[8 minutes]

Round 3: Perform the second transformation. Graph and state the coordinates

[8 minutes]

Round 4: Analyze the coordinates of the pre-image, and the final image. Name the single

transformation that is equivalent to the composition

[5 minutes]

Composition of Transfo	rmations The			
Group Members:				
Problem 1:				
Perform the composition of trai	nsformations $r_{x-axis}{}^{\circ}R_{90}{}^{\circ}$ on			
$\Delta$ TRY with vertices T(-2, 3), R(3,				
Round 1: List the order of transformation	ns to be performed [2 minutes]			
1st Transformation:	2 <sup>nd</sup> Transformation:			
Round 2: Perform the first transformation. Graph and state the coordinates				
Rooma 2. Tenorm me manandimano	[8 minutes]			
Show work and state the coordinates on the construction paper				
Round 3: Perform the second transformation. Graph and state the coordinates				
	[8 minutes]			
Show work and state the coordinates on the construction paper				
Round 4: Analyze the coordinates of the pre-image, and the final image.				
Name the single transformati	on that is equivalent to the composition			
	[5 minutes]			
Single Transformation:				

Composition of Transfe	ormations "Final		
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Group Members:			
Problem 2:			
Perform the composition of tra	Insformations $R_{90^{\circ}}{}^{\circ}r_{y=x}$ on		
$\Delta$ CAT with vertices C(-5, 3), A(2, 6)	), T(7, 1)		
Round 1: List the order of transformation	ons to be performed [2 minutes]		
1st Transformation:	2 <sup>nd</sup> Transformation:		
Round 2: Perform the first transformati	on Graph and state the coordinates		
Rooma 2. Tenomi me mai nanatorman	[8 minutes]		
Show work and state the coordinates of			
Round 3: Perform the second transformation. Graph and state the coordinates			
	[8 minutes]		
Show work and state the coordinates on the construction paper			
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-	the pre-image, and the final image.  tion that is equivalent to the composition		
Name me single nansionna	[5 minutes]		
Single Transformation:	[5		

Composi	tion of Transfe	m emations	
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Group Membe	ers:	<b>(</b>	
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Problem 3:			
	e composition of tra	nsformations $r_{x}$	$r_{-axis}^{0}r_{v=x}$ on
	vertices D(1, 2), O(5, 7)		
	the order of transformation		
1st Transformat	ion:	2 <sup>nd</sup> Transformation	1:
Round 2: Perform the first transformation. Graph and state the coordinates			
Classia	databalla da a a a a d'a ala	II II P	[8 minutes]
Show work and state the coordinates on the construction paper			
Round 3: Perf	form the second transform	mation. Graph and	state the coordinates
			[8 minutes]
Show work and state the coordinates on the construction paper			
Round 4: Analyze the coordinates of the pre-image, and the final image.			
Nar	me the single transformat	ion that is equivaler	-
Single Transfor			[5 minutes]
Single Transformation:			

_	osition of Transformbers:				
Perform the composition of transformations $R_{180^{\circ}}$ $^{\circ}R_{270^{\circ}}$ on $\Delta$ ELF with vertices E(1, -5), L(6, -4), F(3, -1)					
Round 1: List the order of transformations to be performed [2 minutes]					
1 <sup>st</sup> Transform	nation:	2 <sup>nd</sup> Transformat	tion:		
Round 2: Perform the first transformation. Graph and state the coordinates [8 minutes]					
Show work	and state the coordinates o	n the construction	on paper		
Round 3: Perform the second transformation. Graph and state the coordinates [8 minutes]					
Show work and state the coordinates on the construction paper					
	Analyze the coordinates of the Name the single transformation	_	_		
Single Transformation:					