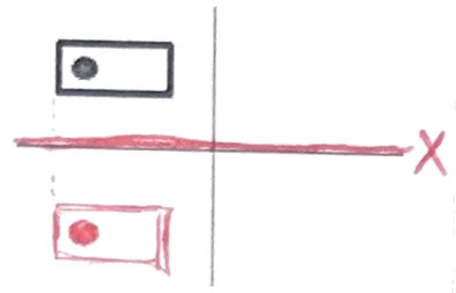
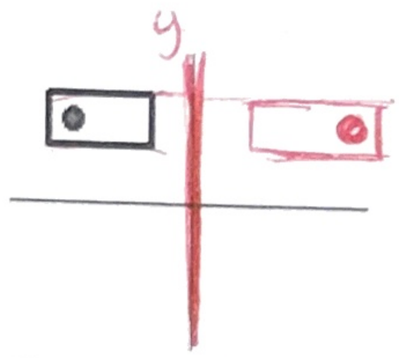
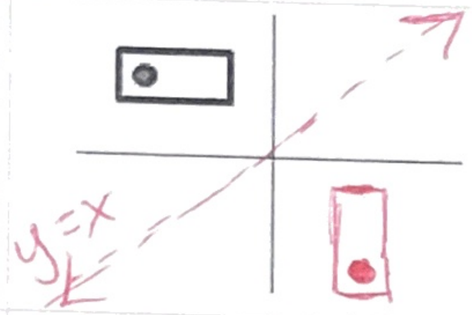
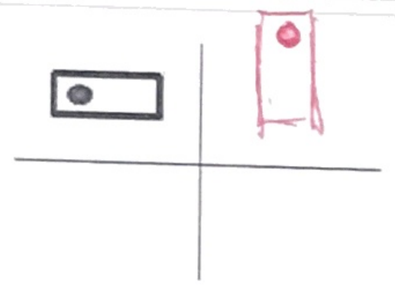
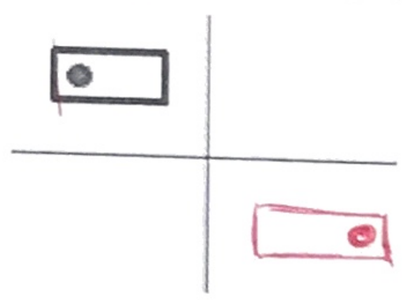
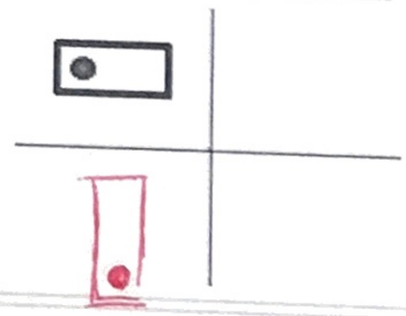
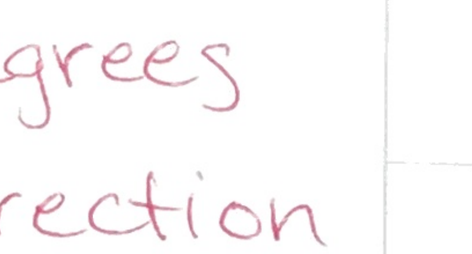
Name: _____ Date: Feb 21 Hour: 2nd

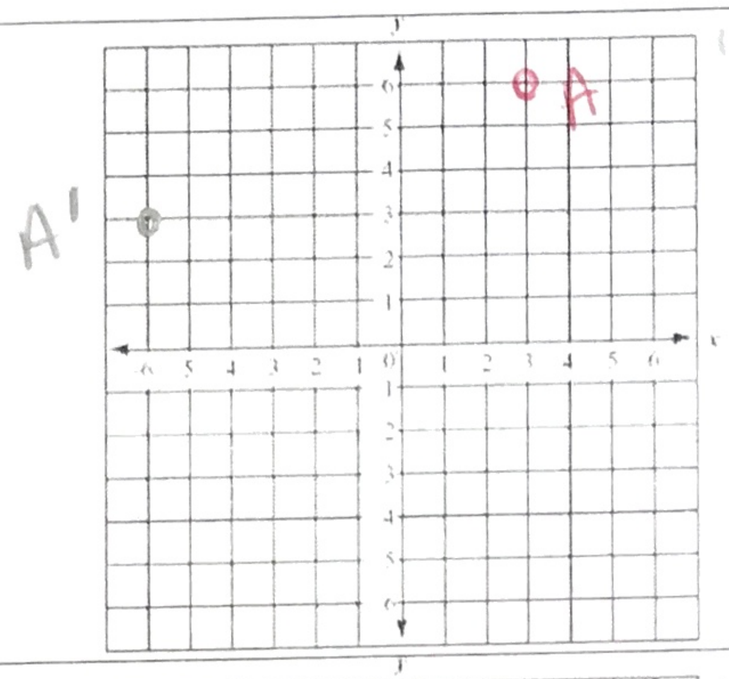
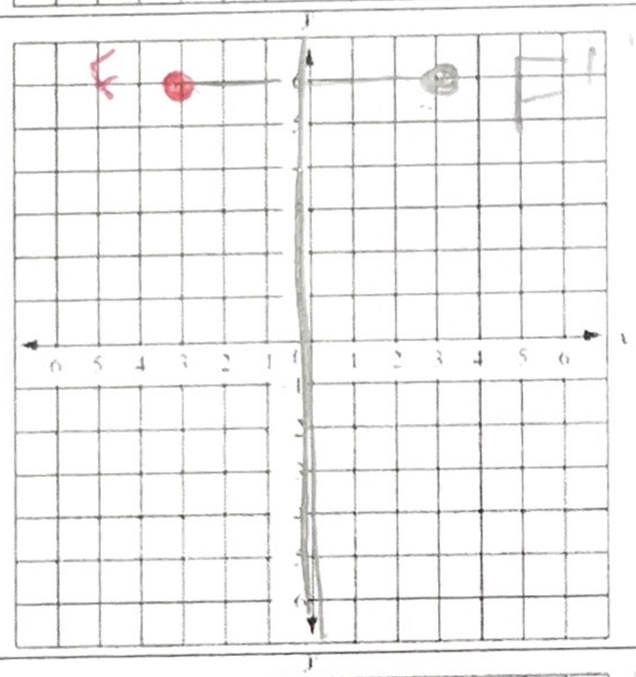
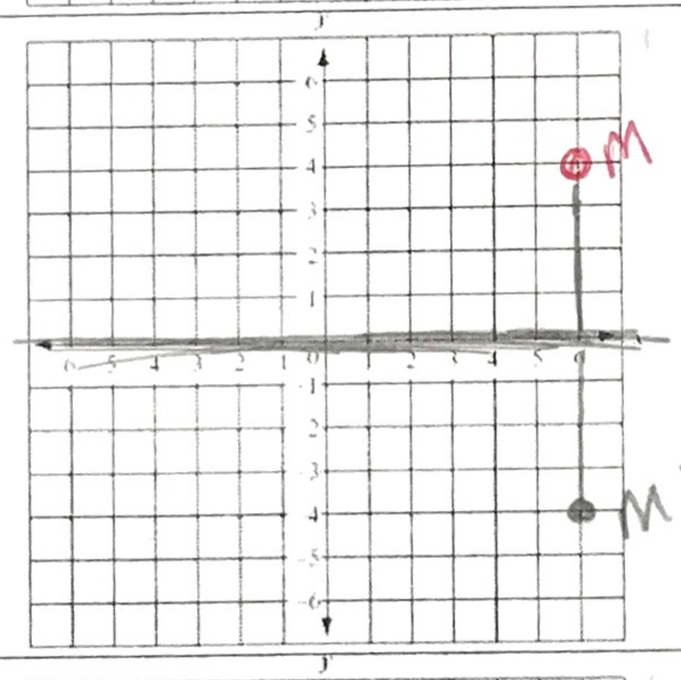
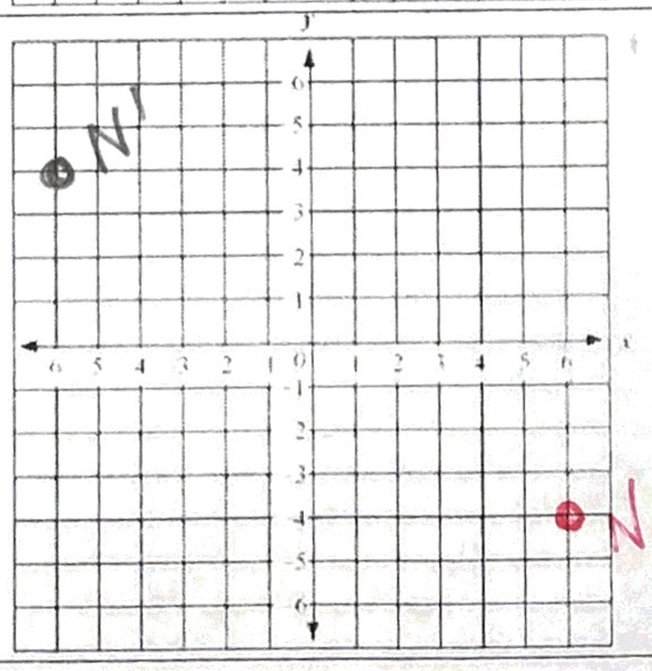
Unit 6A: Day 11: Isometries Review

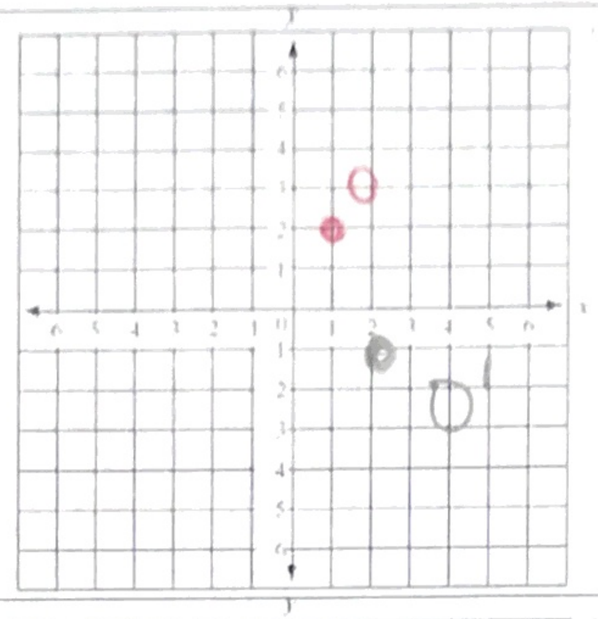
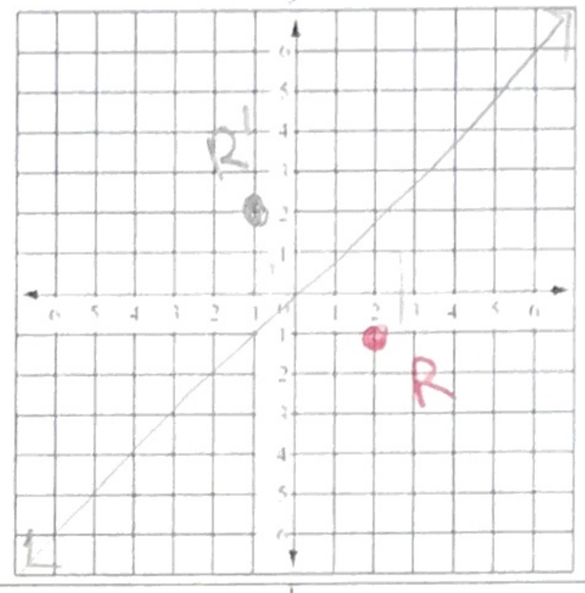
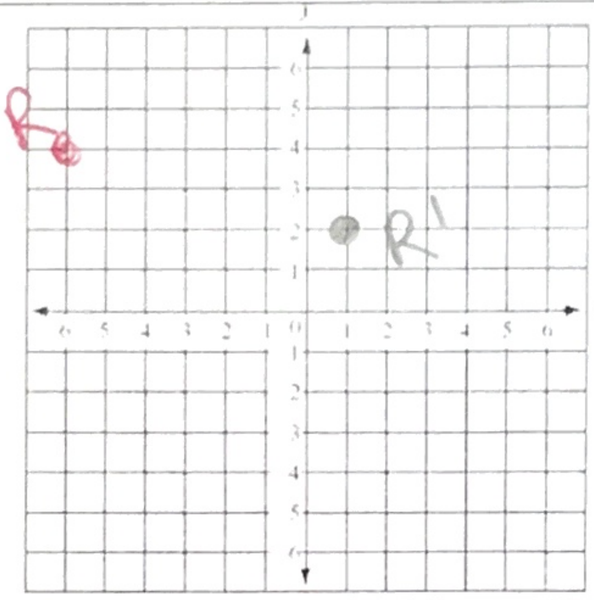
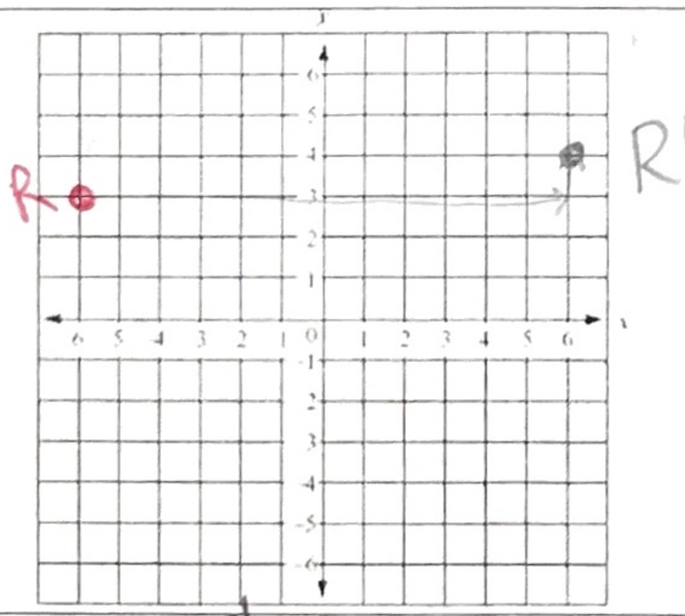
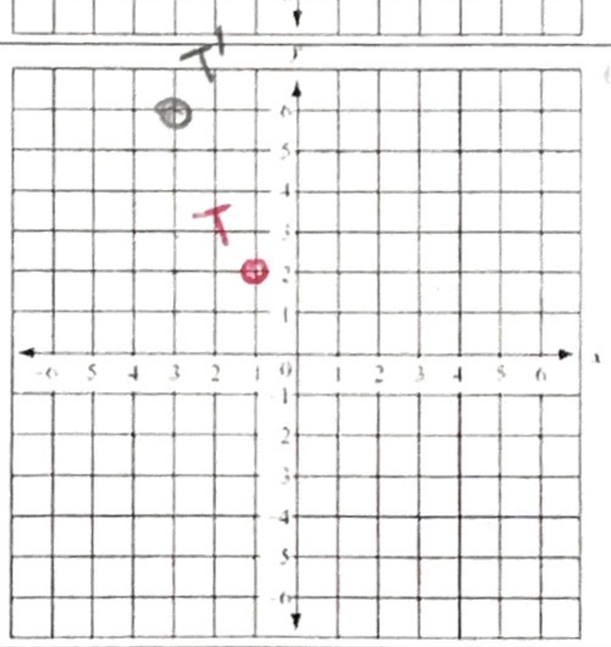
Focus Question: What are all the rules to keep straight?

a transformation that does not change the size

Isometry	Definition	What a picture looks like
Congruent ≅	same shape, same size	
Reflection	flip over a line	Reflect over x axis 
		Reflect over y axis 
		Reflect over y = x 
Rotation	Turn around a point (origin) * degrees * direction cc ↙ cl ↘	Rotate 90° clockwise 
		Rotate 180° 
		Rotate 90° counter-clockwise 
Translation	Slide (shift or move) in a direction!	Up: y + #  Down: y − # Right: x + # Left: x − #

(x, y) → (____ , ____)

Pre-Image Coordinates and Transformation to Preform	Graph	Image Coordinates	Letter it takes us to
A (3,6) Rotate 90° C.C. around origin		(-6,3)	
F (-3,6) Reflected (flip) over y-axis		(3,6)	
M (6,4) Reflected over x-axis		(6,-4)	
N (6,-4) Rotate 180° around origin		(-6,4)	

D	(1,2) rotated 90 CL. around origin		(2,-1)	
R	(2,-1) Reflected over y=x (flip)		(-1,2)	
R	(-6,4) translated (move) (x,y)→(x+7, y-2) right, down		(1,2)	
S	(-6,3) translated (move) (x,y)→(x+12, y+1) right, up		(6,4)	
T	(-1,2) translated (x,y)→(x-2, y+4) left, up		(-3,6)	

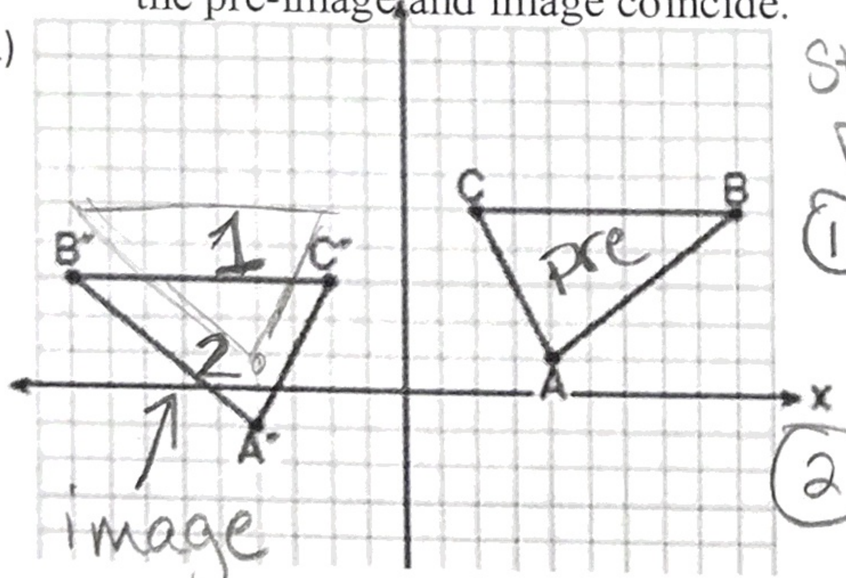
The letters unscrambled spell TRANSFORM

Which of the following do ALL isometries preserve? (Circle all that apply) same size & shape ≅ Congruent

A. Segment Lengths B. Angle Measures C. Parallel Lines

Part C: Describe a sequence of transformations to make the pre-image and image coincide.

1)

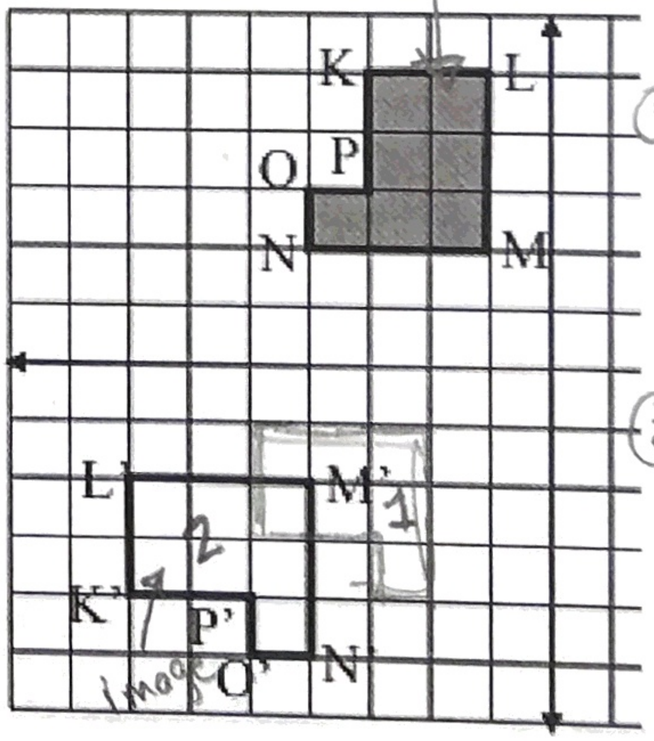


Start at preimage ABC

① Reflect over y-axis

② translate down 2 units

2)



Start at preimage KLMNOP

① Rotate 90° C.C. around the origin

② translate Left 2 & down 1