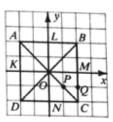
## **Geometry Chapter 4 In Class Review**

1. Use the translations T:  $(x, y) \rightarrow (x - 3, y + 1)$  and S:  $(x, y) \rightarrow (3x, 3y)$ .a) Find T: (-2, 5)b) Find S: (2, -1)

c) What is the preimage of (3, -2) under T?

2. Use the figure to	complete each statement	**LIST ALL ANSWERS AS THE NEW LETTER**
a) R <sub>*</sub> : A →	b) R <sub>y</sub> : D <del>-&gt;</del>	c) T: (x, y) → (x – 1 , y – 3), T: B →

d)  $\mathcal{R}_{0,90}$ : C  $\rightarrow$  e) Rj: A  $\rightarrow$ 



3. Use T: (x, y)  $\rightarrow$  (x – 2, y + 1), P(2, 4), origin O and line I with equation y = x to answer each. You can use the graph to help. **\*\*LIST ALL ANSWERS AS COORDINATES**\*\*

a) R <sub>x</sub> ∘ R <sub>y</sub> : (2, 4) →	
b) T ∘ R <sub>x</sub> : (5, 1) →	
c) $\mathscr{R}_{p} \circ R_{y}: (1, -1) \rightarrow$	
d) R <sub>y</sub> ∘ R <sub>i</sub> : (-2, 3) →	

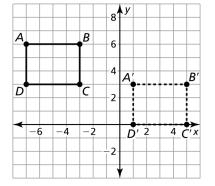
4. Use the given translations S: (x, y) → (x + 2, y - 3) and T: (x, y) → (x - 2, y + 1) and points A(-2, 4), B(3, -2) and C (-2, 0) to answer each. \*\*List answers as coordinates)
a) S: A→
b) T: B→
c) T: C→
d) S ∘ T: (x, y) →

5. Use the following information to answer each: A(-2, 1), B(2, -4) \*\*LIST ALL ANSWERS AS COORDINATES\*\*

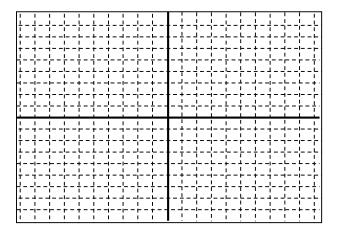
a)  $D_{0, \frac{1}{2}}: A \rightarrow b$  b)  $D_{0, -3}: B \rightarrow c$ ) What is the reflection of B around the x-axis?

d)What is the reflection of A around the y-axis? e) What is the reflection of A around the line y = x?

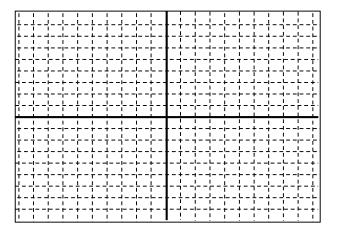
6. Write a rule for the following transformation:



- 7. Plot each polygon and then reflect in the given line.
  - a) A (2, 4) B(-1, 3) C(3, -2) about x = 1



b) D(1, 2) E(3, 4) F(2,	-1) G(-3, -1)	about y = -1
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d) Use points A, B and C and rotate 180<sup>0</sup> about the origin. What are the new coordinates?

e) Use points A, B, C and D and rotate 90<sup>o</sup> about the origin. What are the new coordinates?

8. Plot the following points: X (-2, 4) Y(1, 3) and Z(1, -4) Now plot X' Y' and Z' after the transformation D<sub>0, -2</sub>.

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