☐ **DO NOW – Geometry Regents Lomac 2014-2015** **Date** 10/17 **due** 10/18 **Translations** **2.7**

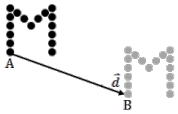
(DN) Copy each transformation notation and describe what each means.

(a) $r_{\overline{HA}}$ (△REM)

(b) $R_{B,133°}$(△RAT)

Name _____ **Per**_____

SLO: I can translate figures by construction and write and interpret function notation for translations.



☐ (1) **Translation notes**

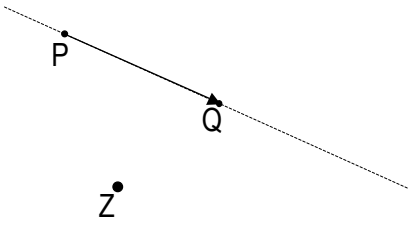
N10

☐ (2) **Translations preservation of distance and direction**

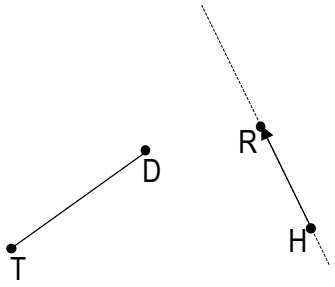
Transp-arency Dry erase marker Eraser compass

☐ (a) Use dry erase markers and transparencies to visualize the transformation function of the plane.

$T_{\overline{PQ}}(Z)$



$T_{\overline{HR}}(\overline{TD})$

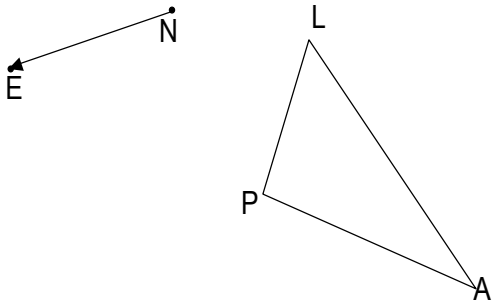


☐ (b) Use the fact that that translations preserve distance to construct the translation of each figure above.

☐ (3) **Translations practice** (highlighters recommended, 1 color for each point you translate)

compass

☐ (a) Construct the translation of triangle PLA along vector NE and write the translation in function notation. Use highlighters to make your work clear. Transparencies may help you see what to do.

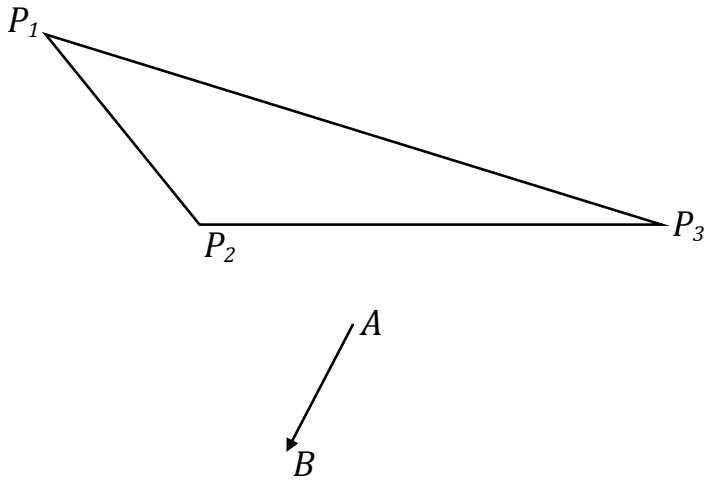


Function Notation:_____ What do you notice about segments LL', PP', and AA'? _____

☐ (3) **Transformations practice** (highlighters recommended, 1 color for each point you translate)

cont compass highlighter

☐ (b) Use your compass and straightedge to translate the triangle along vector AB. Explain each step as you do the construction.



_____

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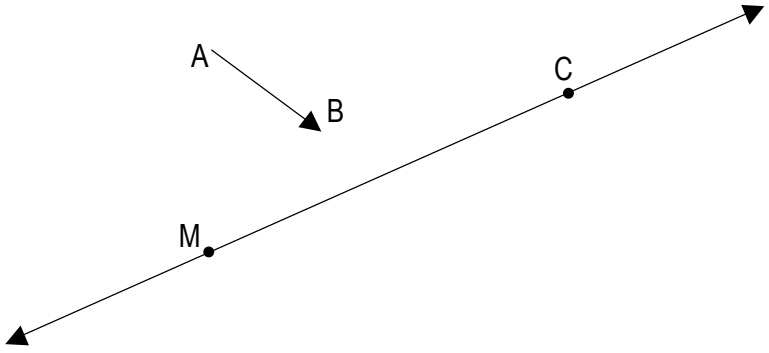
_____

☐ (4) **Translate a line** (highlighters recommended, 1 color for each point you translate)

compass

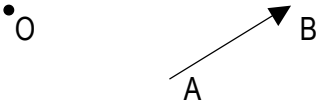
☐ (a) Translate $\overleftrightarrow{MC}$ along vector $\overrightarrow{AB}$.



What is the relationship between $\overleftrightarrow{MC}$ and $\overleftrightarrow{M'C'}$? _____

☐ (5) compass **Exit Ticket**

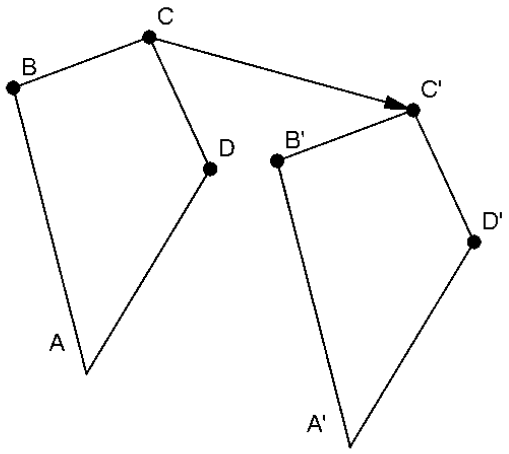
☐ Draw point O and vector AB on your paper something like the diagram at right.



Construct $T_{\overrightarrow{AB}}(O)$

☐ (6) compass **Homework**

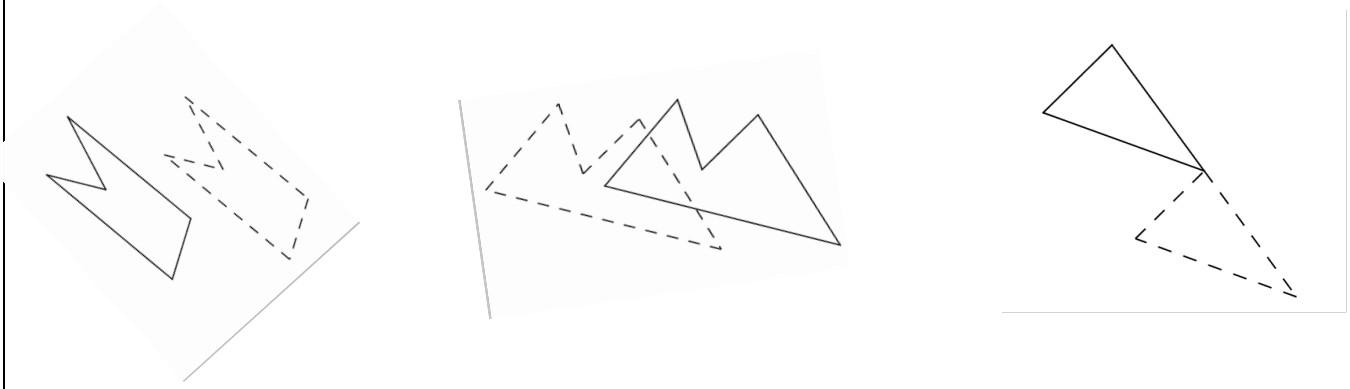
☐ (1) The translation vector CC' is shown. Draw the translation vectors for B, A, and D.



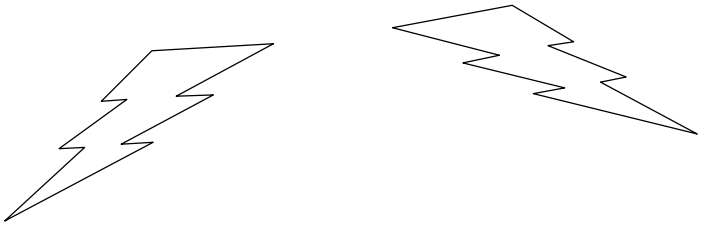
What do you notice about all of the vectors you have drawn?

_____

☐ (2) Draw 1 translation vector for each preimage-image pair. The preimages are solid while the images are dashed.



☐ (3) Construct the line of reflection for the images below. (lesson 2.3 #4)

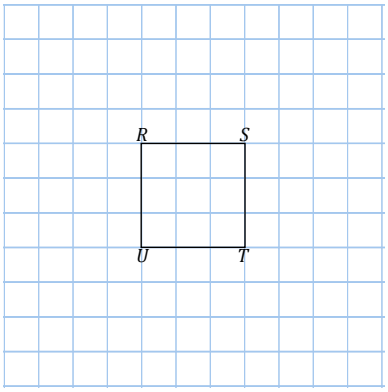


(continued on next page)

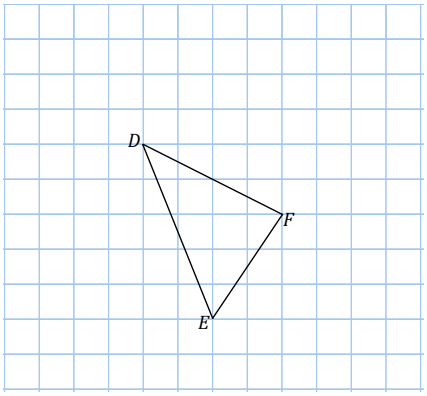
☐ (6) cont **Homework**

☐ (4) Use the grid to translate each figure as directed. Draw the translation, label the images with prime notation and draw the vector that defines the translation.

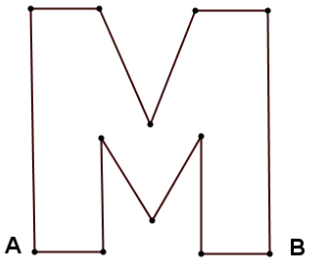
(a) Translate 3 units left and 2 units down.

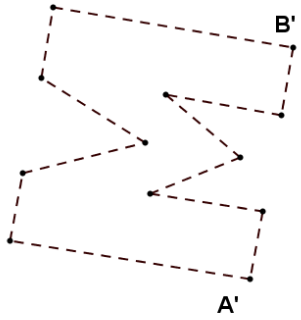


(b) Translate 2 units. right and 1 unit up



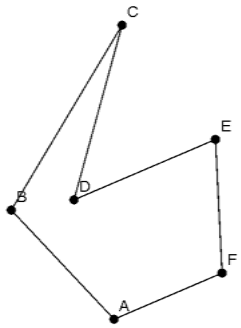
(5) Construct the center of rotation for shape M by finding the point where the perpendicular bisector of $\overline{AA'}$ intersects the perpendicular bisector of $\overline{BB'}$. (lesson 2.6 #4)

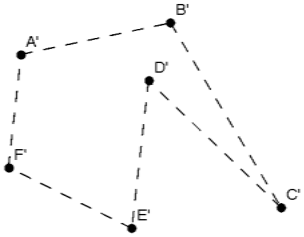




Find the center of rotation

(a) ☐





(b) ☐