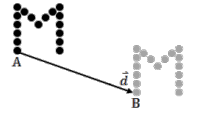| Geometry Local Lomac 2015-2016	Date 2/26 due 3/1	Constructing Translations 9.8L

Name _____ **Per**_____

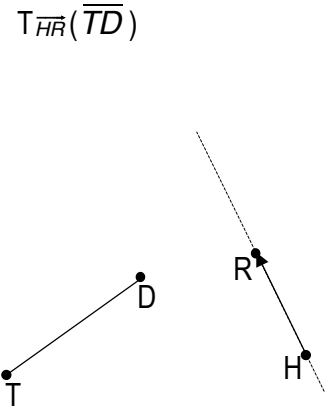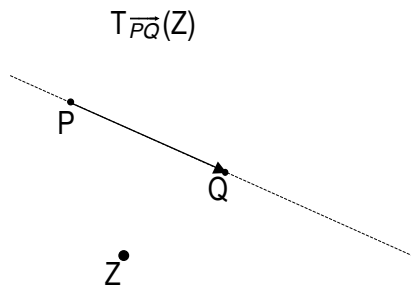**LO:** I can translate figures by construction and write and interpret function notation for translations.

☐ **DO NOW** On the back of this packet

☐ **(1)** **Translation notes**
N10

☐ **(2)** **Translations: preservation of distance, angle measure, and direction**
tracing
paper   ☐ (a) Use tracing paper to visualize the transformation function of the plane.
compass

$T_{\overrightarrow{PQ}}(Z)$ $T_{\overrightarrow{HR}}(\overline{TD})$

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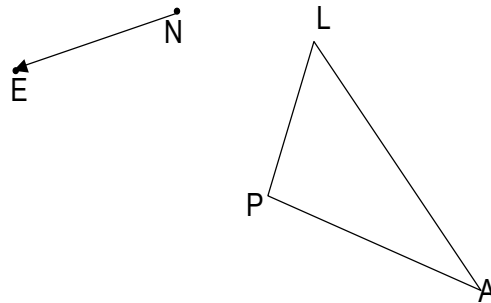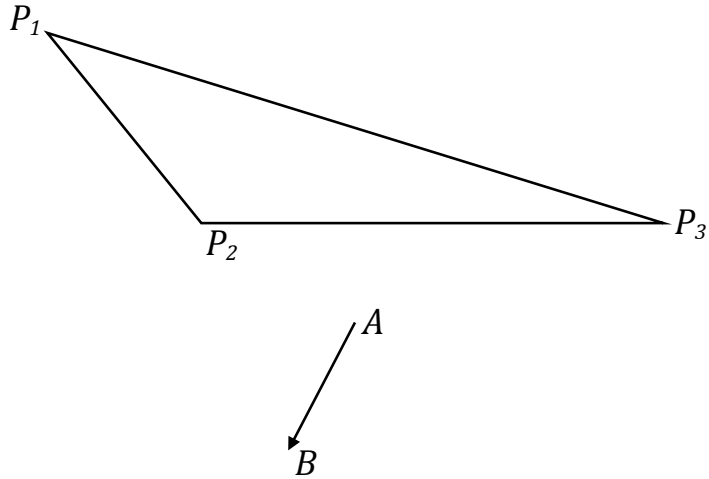
Function Notation:_____ What do you notice about segments LL', PP', and AA'? _____

2

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

cont
compass
highlighter

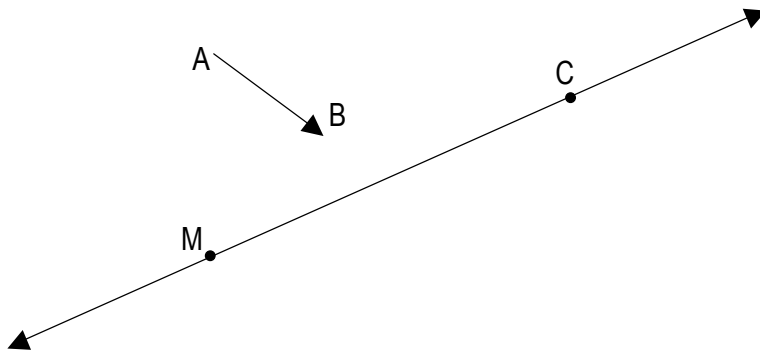☐ (b) Use your compass and straightedge to translate the triangle along vector AB. Explain each step as you do the construction.

P_1

P_2

P_3

A

B

_____
_____
_____
_____
_____
_____
_____

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

compass

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

A

B

C

M

What is the relationship between $\overleftrightarrow{MC}$ and $\overleftrightarrow{M'C'}$? _____
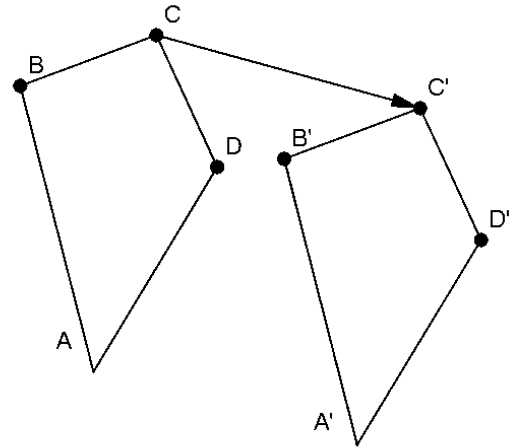
☐ (6) **Exit Ticket**

ON THE LAST PAGE

☐ (8) **Homework**

☐ (1) The translation vector CC' is shown. Draw the translation vectors for B, A, and D.
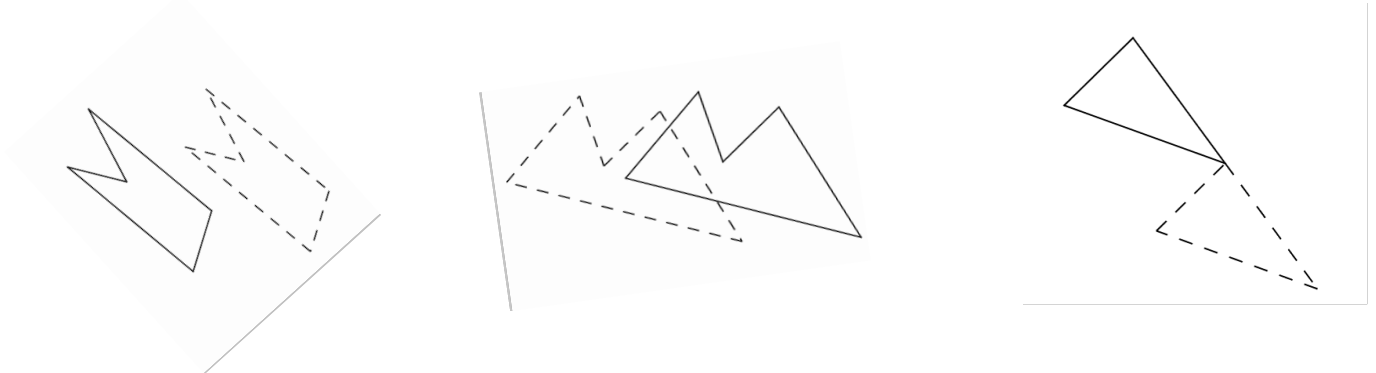
What do you notice about all of the vectors you have drawn?
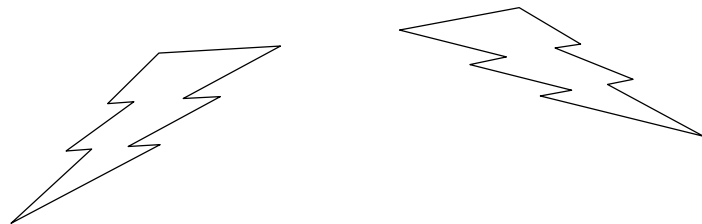
They are all _____

and _____

☐ (2) Draw 1 translation vector for each preimage-image pair. The preimages are solid while the images are dashed. (remember, vectors end with an arrow)

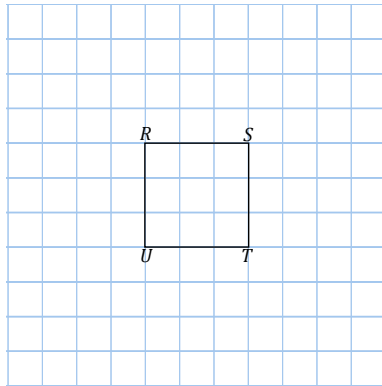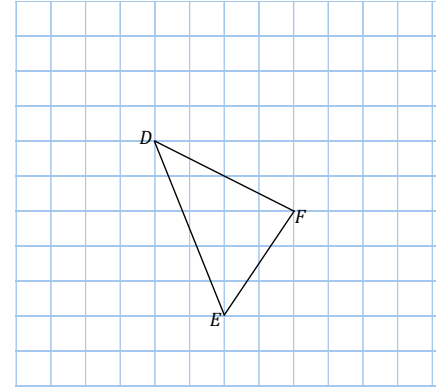☐ (3) Construct the line of reflection for the images below. (lesson 2.3 #4)

4

☐ (8)   **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.
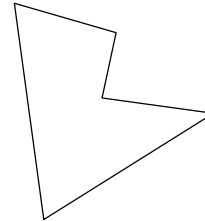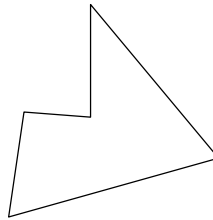
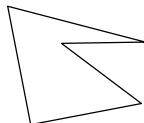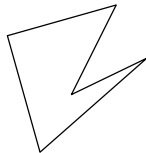(a) Translate 3 units left and 2 units down.

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

(5) Construct the center of rotation.

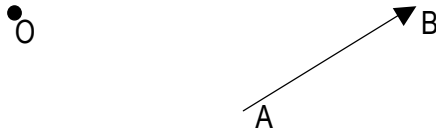(6) Construct the line of reflection.

EXIT TICKET   **Name**_____ **Date** _____ _____ **Per_** _____   **9.8L**

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

☐ Construct T$_{\overrightarrow{AB}}$(O).

$\bullet$O   ▼B

                    A

☐ (b) Describe why the construction you did in part (a) guarantees the described translation.

DO NOW   **Name**_____ **Date** _____ **Per**_____   **9.8L**

(1) Copy each transformation notation and describe what each means.
  (a) $r_{\overleftrightarrow{HA}}$ ($\triangle$REM)
  (b) $R_{B,133°}$($\triangle$RAT)

  (a)

  (b)

(2) Logic is a MAJOR concept in Geometry. What about the logic cartoon below is supposed to make people smile?