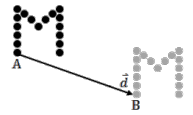| Geometry Regents Lomac 2015-2016	Date 10/13 due 10/14	Constructing Translations 2.8R

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 and direction**
Transp-
arency
Dry
erase
marker
Eraser
compass

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

$T_{\overrightarrow{PQ}}(Z)$
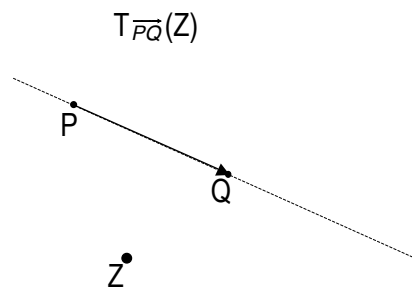
$T_{\overline{HR}}(\overline{TD})$
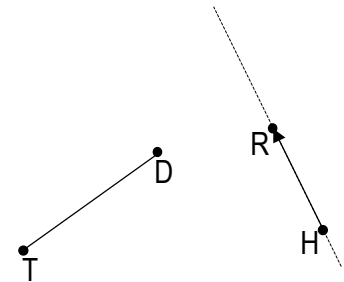
☐ (b) Use the fact that that translations preserve distance to construct the translation of each figure above.

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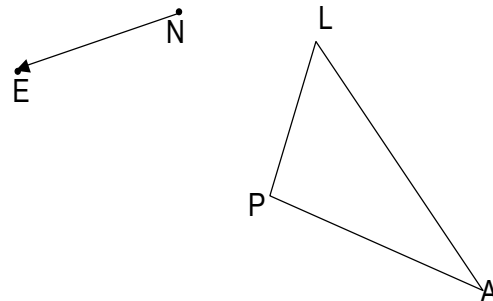
Function Notation:_____ What do you notice about segments LL', PP', and AA'? _____

2.8R

**(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

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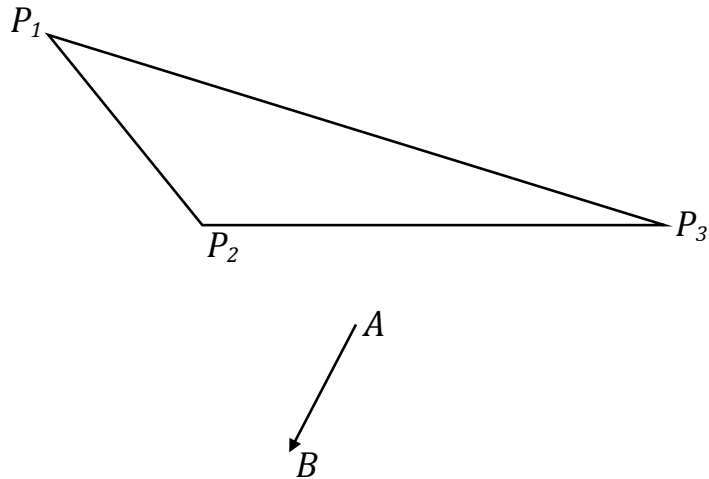
(5) **Translate a line** (highlighters recommended, 1 color for each point you translate)

compass

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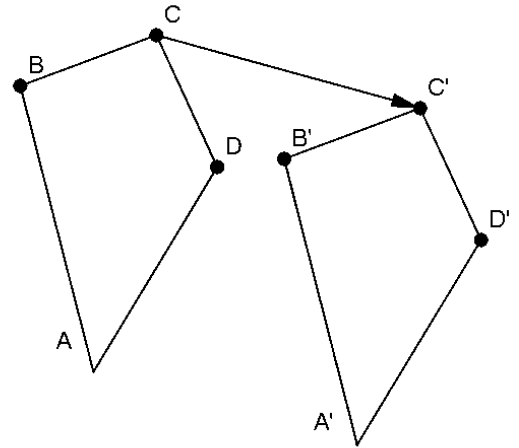
A

B

C

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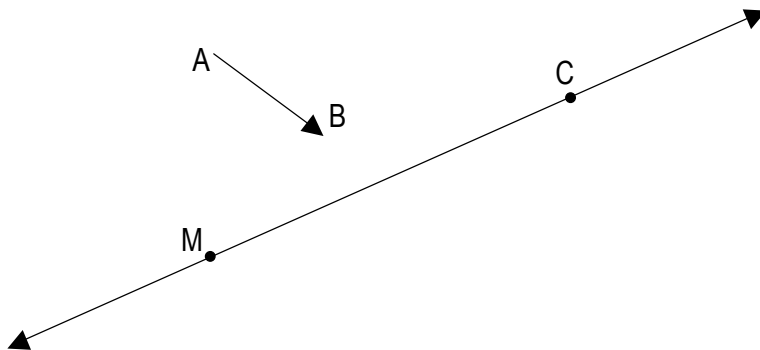
What is the relationship between $\overleftrightarrow{MC}$ and $\overleftrightarrow{M'C'}$? _____
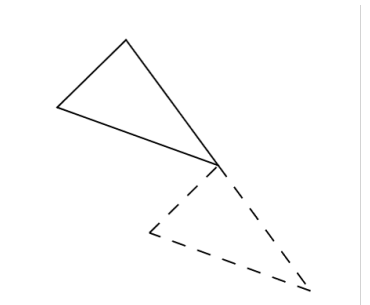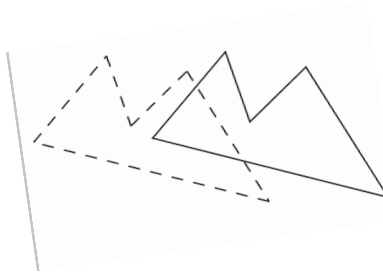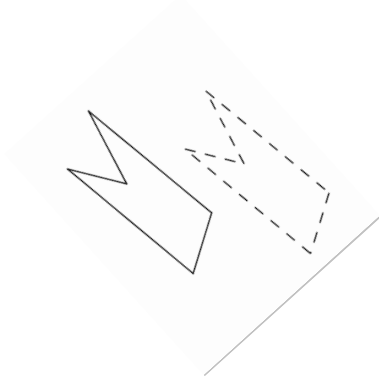
☐ (6) **Exit Ticket**

ON THE LAST PAGE

☐ (8) **Homework**

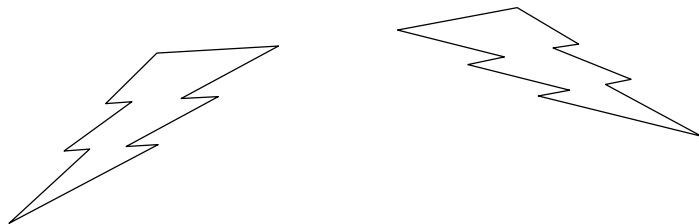☐ (1) The translation vector CC' is shown. Draw the translation vectors for B, A, and D.

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

_____

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

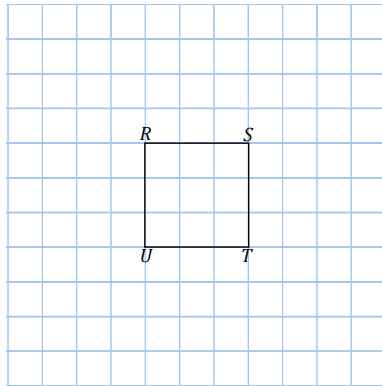☐ (3) Construct the line of reflection for the images below. (lesson 2.3 #4)
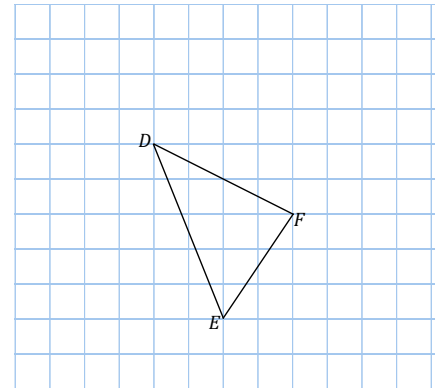
☐ (8) **Homework**

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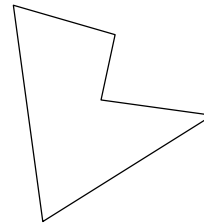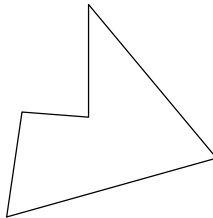
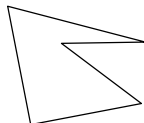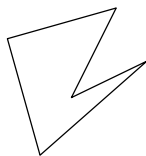(a) Translate 3 units left and 2 units down.

(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_ _____   2.8R

(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:

☐   Use a straightedge to draw point O and vector AB on your paper something like the   • O   ▼ B
diagram at right.   From the point O and vector AB that you drew, Construct $T_{\overline{AB}}(O)$.   A
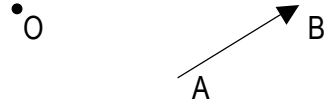
☐ (b) Describe why the construction you did in part (a) guarantees the described translation.

DO NOW   Name_____ Date _____ Per_____   2.8R

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

     (a) $r_{\overline{HA}}$ ($\triangle$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?

PENGUINS ARE BLACK AND WHITE.
SOME OLD TV SHOWS ARE BLACK AND WHITE.
THEREFORE, SOME PENGUINS ARE OLD TV SHOWS.

GLASBERGEN

Logic: another thing that penguins aren't very good at.