(DN) Draw segment AB with midpoint M and angle TVS with vertex V. Is vertex V a midpoint? How do you know? Is midpoint M also a vertex? How do you know?

Name _____**Per**_____

SLO: I can use function notation to describe **rotations** in the plane and can construct rotations with a compass and straightedge.


☐ (1)
N10
Rotations notes Complete the rotation notes on page N10

R_____,_____(_____)

☐ (2)
Transp-
arency
Dry
erase
marker
Eraser
Rotations Demonstrate rotations of the plane with transparencies and dry erase markers and name them with function notation

Use function notation to describe each rotation. Verify that each diagram illustrates a rotation by tracing the original figure and rotating according to the function notation that you have written.
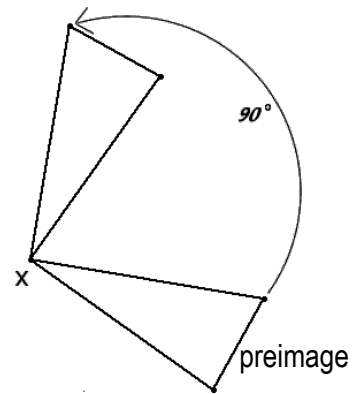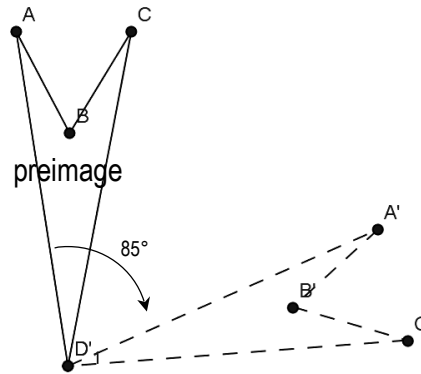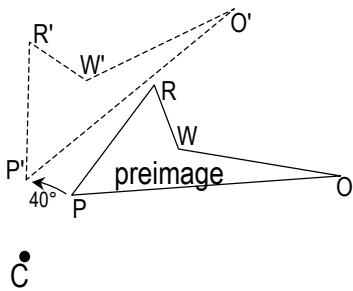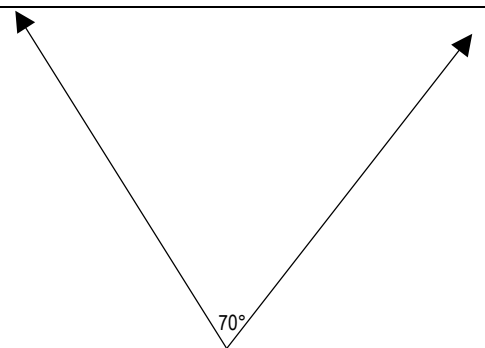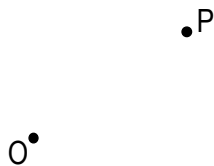
Function: _____   Function: _____   Function: _____

I know that all three of these are rotation functions because (1) a rotation function is _____

_____

and (2) when I traced and rotated each figure, _____

☐ (3)
compass
Rotations Construct $R_{O,\ 70°}(P)$
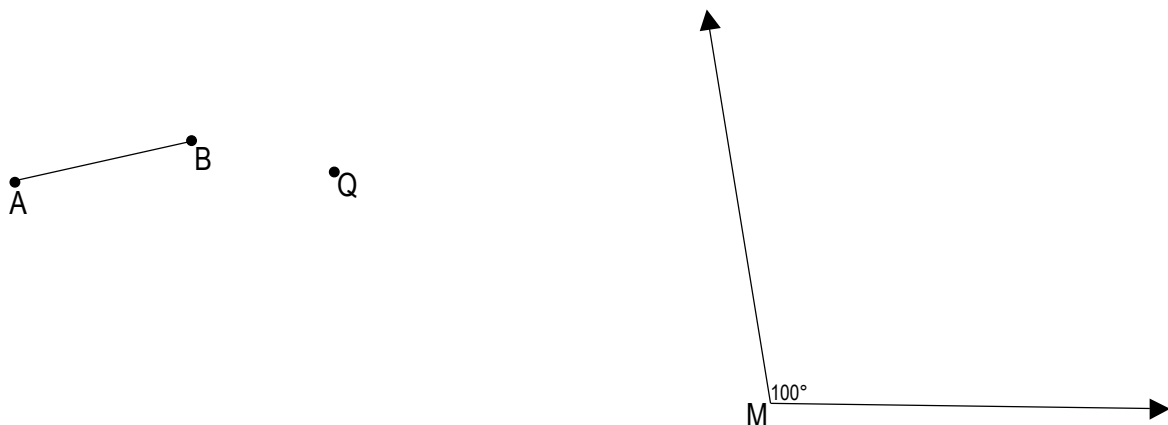
•P

O•

70°

From the notation, you must rotate point _____ around point _____ a measure of _____ in a

_____ direction.

If you rotate a point and trace its path, what shape do you get?_____

How can you use the 70° angle to help with your construction? _____

□ (4)
compass

Rotations Construct $R_{Q, \angle M}(\overline{AB})$ List your steps. Use a different color highlighter to show the rotation of each point.

B

A

•Q

100°
M

Step 1: _____

_____

Step 2: _____

_____
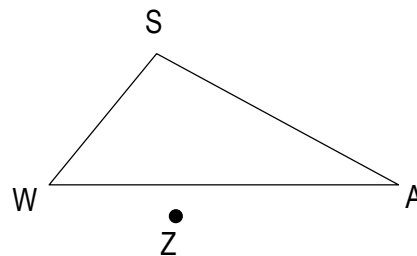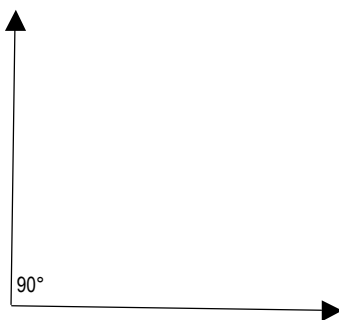
Step 3: _____

_____

Step 4: _____

_____

Step 5: _____

_____

$\overline{AB} \cong \overline{A'B'}$ because _____

□ (5)
compass

Rotations Practice Perform each rotation.

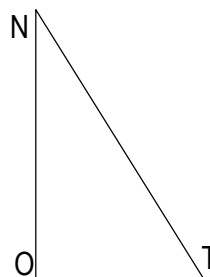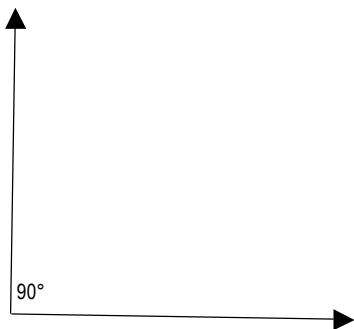□ (a) $R_{Z, 90°}(\triangle WAS)$

90°

S

W

A

•
Z

$\triangle WAS \cong \triangle W'A'S'$ because _____

☐ (5) **Rotations Practice** Perform each rotation.

cont
compass   ☐ (b) $R_{O,90°}$ ($\triangle$NOT)

$\triangle$NOT$\cong$$\triangle$N'O'T' because _____

☐ (6) **Exit Ticket**

☐ (a) Draw point A, point B. Off to the side draw acute angle C. Then construct the transformation function

$R_{B,\angle C}(A)$

☐ (7) | **Homework** (next page)

☐ (7) **Homework**

☐ (1) Describe each function notation in words.

$R_{X,\,30°}(Y)$ _____

_____

$R_{C,\,-120°}(\triangle LMN)$ _____

_____

$r_{\overline{PQ}}(\triangle ZOT)$ _____

_____

$R_{H,\,\angle C}(\overline{AT})$ _____

_____

☐ (2) Sketch each of the following:

(a) Z is the midpoint of $\overline{AE}$ (b) $\overleftrightarrow{QR} \parallel \overleftrightarrow{ST}$ (c) ∠SAL and ∠LAD are a linear pair

☐ (3) Construct equilateral triangle BOS. In triangle BOS, bisect angle B.