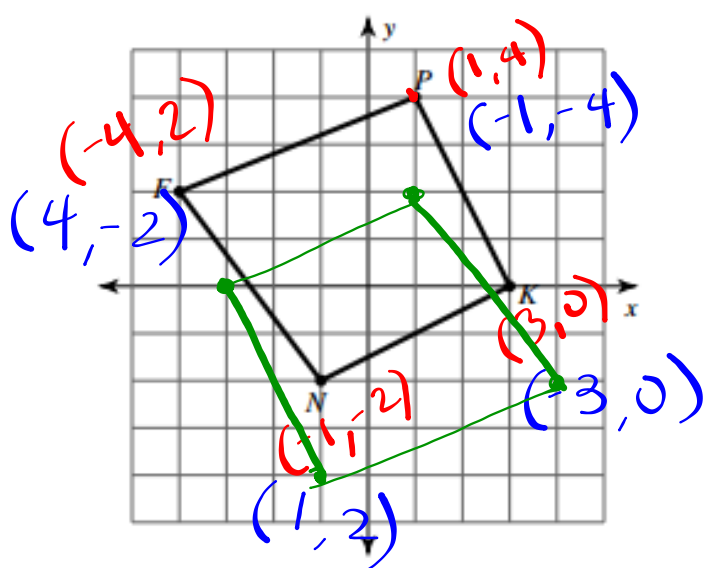
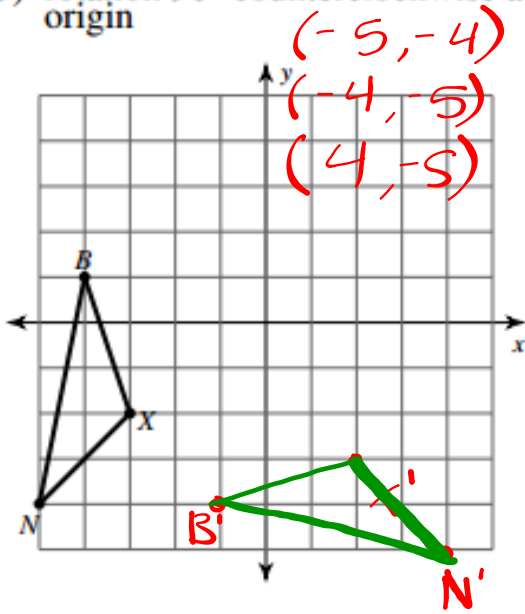


1) rotation 180° about the origin



3) rotation 90° counterclockwise about the origin



$(-5, -4)$
 $(-4, -5)$
 $(4, -5)$

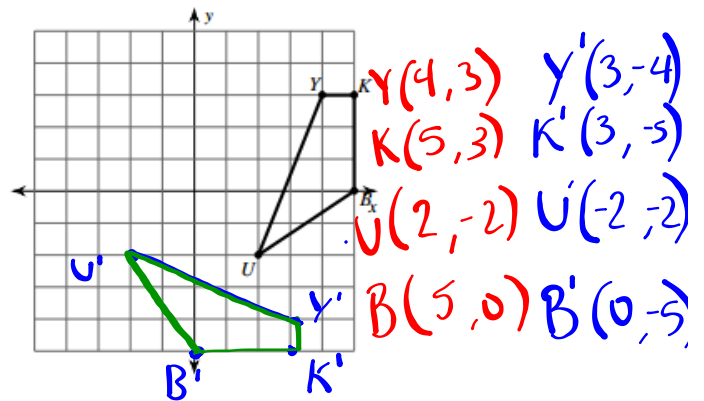
$B(-4, 1)$
 $X(-3, -2)$
 $N(-5, -4)$

$B'(-1, 4)$
 $X'(2, -3)$
 $N'(4, -5)$

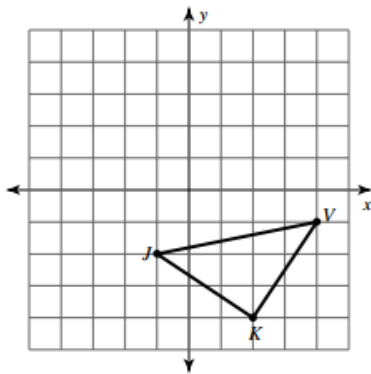
$(-3, -2)$
 $(-2, -3)$
 $(2, -3)$

$(1, -4)$
 $(-1, -4)$

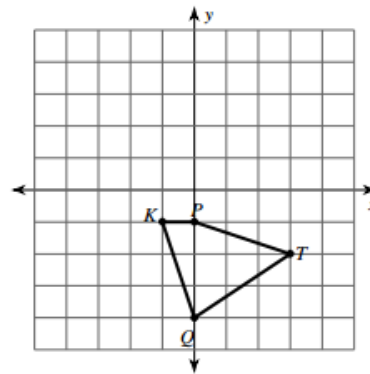
4) rotation 90° clockwise about the origin



5) rotation 90° clockwise about the origin



6) rotation 180° about the origin



Reflections

Over

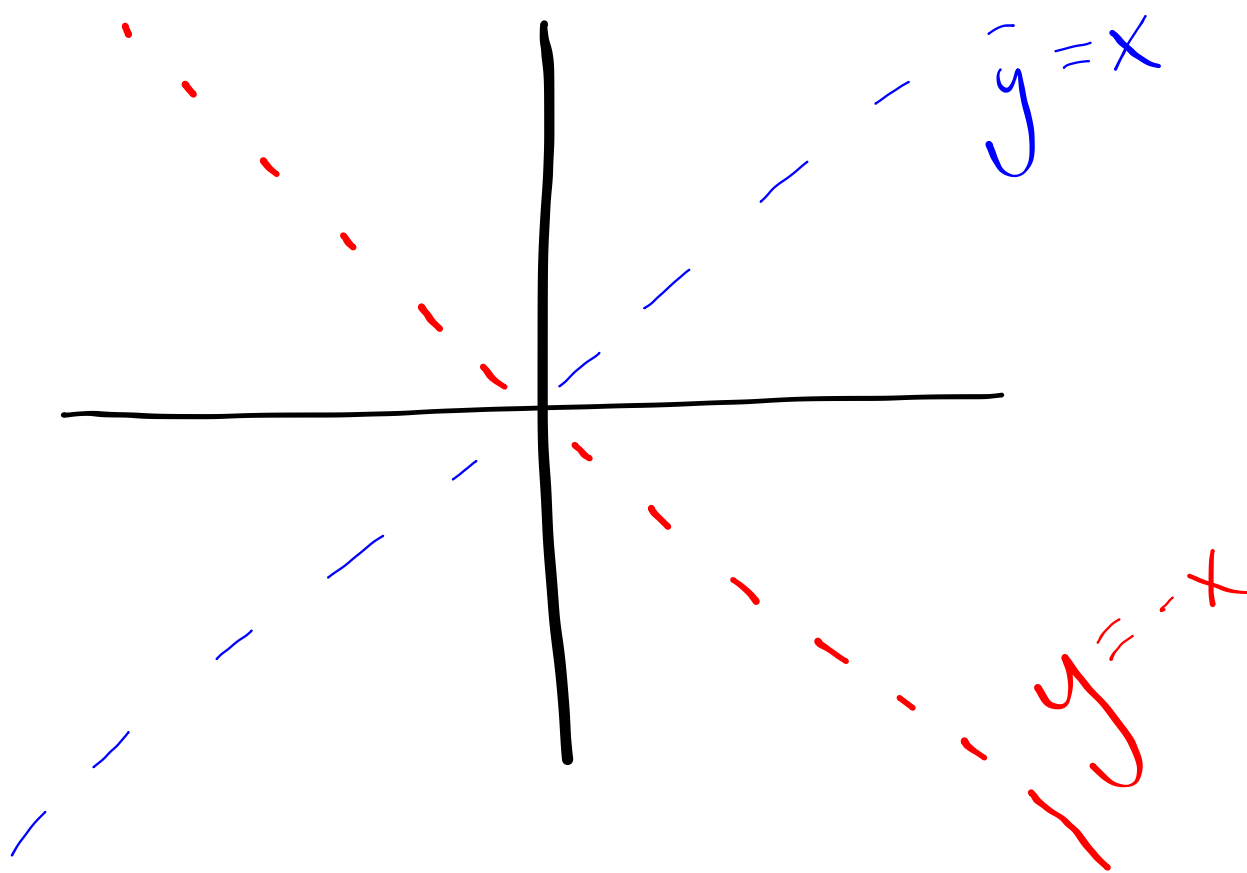
$$y = x$$

$$(x, y) \rightarrow (y, x)$$

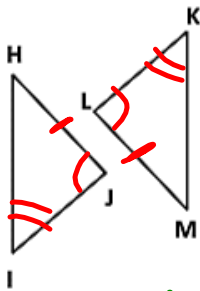
Over

$$y = -x$$

$$(x, y) \rightarrow (-y, -x)$$

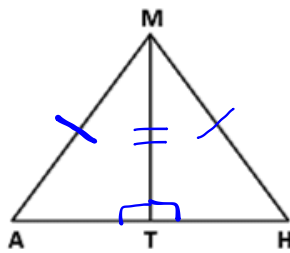


Given: $\overline{HJ} \cong \overline{LM}$
 $\angle J \cong \angle L$
 $m\angle I = m\angle K$



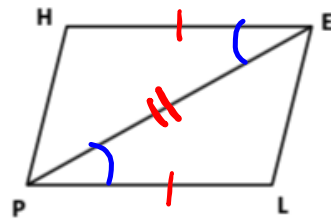
Congruence Rule: AAS
 Statement: $\triangle HIJ \cong \triangle MKL$

Given: $\overline{MT} \perp \overline{AH}$
 $\overline{MA} \cong \overline{MH}$



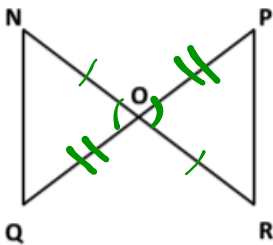
Congruence Rule: HL
 Statement: $\triangle MAT \cong \triangle MHT$

Given: $\angle HEP \cong \angle LPE$
 $\overline{HE} \cong \overline{PE}$



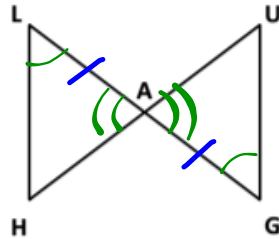
Congruence Rule: SAS
 Statement: $\triangle HEP \cong \triangle LPE$

Given: $\overline{NO} \cong \overline{OR}$
 $\overline{QO} \cong \overline{OP}$



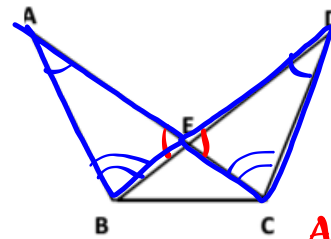
Congruence Rule: SAS
 Statement: $\triangle NOQ \cong \triangle ROP$

Given: $\angle A = \angle G$
 $\angle L \cong \angle G$



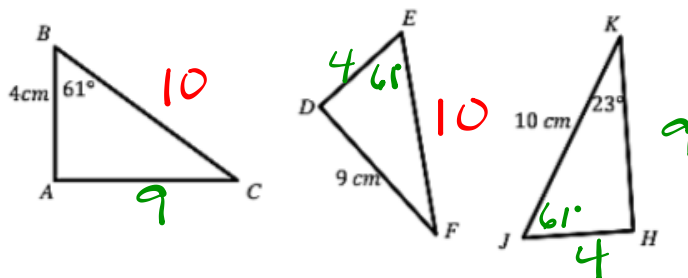
Congruence Rule: ASA
 Statement: $\triangle LAH \cong \triangle GAU$

Given: $\angle A \cong \angle D$
 $\angle ABE \cong \angle DCE$

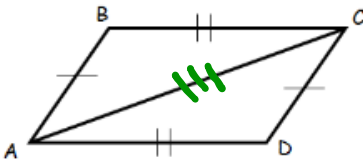


Congruence Rule: AAA
 Statement: $\triangle ABE \cong \triangle DCE$

Given: $\triangle ABC \cong \triangle DEF \cong \triangle HJK$, find the all missing angles and sides.



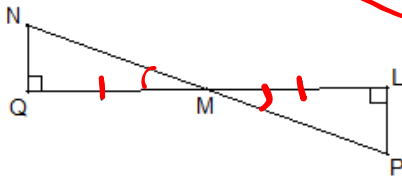
A. Given: $\overline{AB} \cong \overline{CD}$, $\overline{BC} \cong \overline{AD}$
 Prove: $\triangle ABC \cong \triangle CDA$



Statements
 $\overline{AB} = \overline{CD}$, $\overline{BC} = \overline{AD}$
 $\overline{AC} = \overline{AC}$
 $\triangle ABC \cong \triangle CDA$

Reasons
 Given
 Reflexive Prop.
 SSS

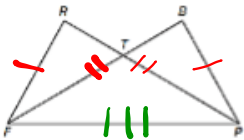
B. Given: $\overline{QM} \cong \overline{ML}$ and $\angle QMN \cong \angle LMP$
 Prove: $\triangle NQM \cong \triangle PLM$



Statements
 $\angle Q \cong \angle L$
 $\triangle NQM \cong \triangle PLM$

Reasons
 Given
 Given
 90° angles are =
 ASA

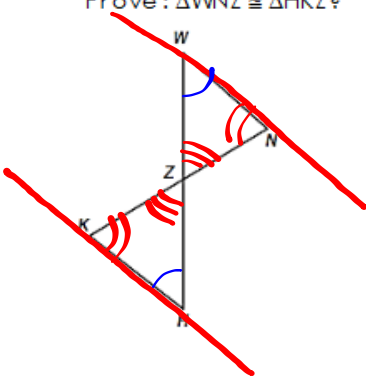
C. Given: $\overline{RF} \cong \overline{BP}$ and $\overline{BF} \cong \overline{RP}$
 Prove: $\triangle RFP \cong \triangle BPF$



Statements
 $\overline{FP} \cong \overline{FP}$
 $\triangle RFP \cong \triangle BPF$

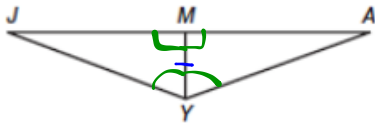
Reasons
 Reflexive
 SSS

D. Given: $\overline{WN} \parallel \overline{HK}$
 Prove: $\triangle WNZ \cong \triangle HKZ$?



$\overline{WN} \parallel \overline{HK}$	Given
$\angle NWZ \cong \angle KHZ$	Alt. Int.
$\angle WNZ \cong \angle HKZ$	Alt. Int.
$\angle WZN \cong \angle KZH$	Vert. \angle 's
$\triangle WNZ \cong \triangle HKZ$	NOT \cong AAA

E. Given: $\overline{JA} \perp \overline{MY}$ and \overline{YM} bisects $\angle JYA$
 Prove: $\triangle JYM \cong \triangle AYM$?



1.	Given
2. $\angle JMY \cong \angle AMY$	2. Def of Perpendicular
3. $\overline{MY} \cong \overline{MY}$	3. Reflexive
4. $\angle JYM \cong \angle AYM$	4. Def. of bisects
5. $\triangle JYM \cong \triangle AYM$	ASA