

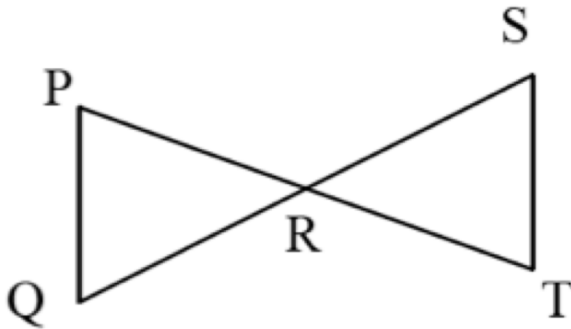
(DN) Sketch 5 triangles. Each triangle must show what is needed to prove triangles congruent by one of the triangle congruence shortcuts. Each triangle should show a different shortcut. The shortcuts are:
SAS, ASA, SSS, AAS, HL.

Name _____ Per _____
LO: I can write Transformation and Euclidian proofs

(1t) **Transformation Proof**

transparencies, dry erase markers, eraser, compass, straightedge

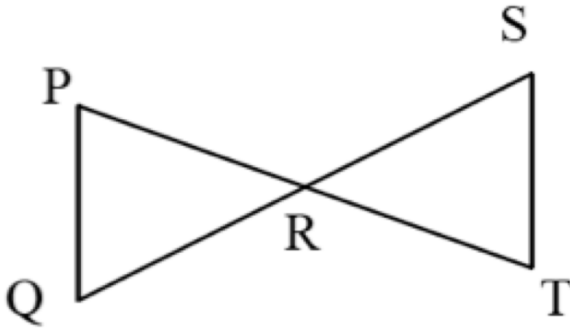
Describe a series of transformations that will show that the triangles below are congruent. Use the fact that R is the midpoint of both \overline{PT} and \overline{QS} . Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the three points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.



(1e) **Euclidian Proof**

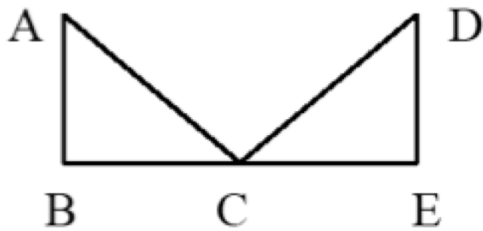
transparencies, dry erase markers, eraser, compass, straightedge

Write a series of "I know that . . . because . . ." statements that prove that the triangles below are congruent. Use the fact that R is the midpoint of both \overline{PT} and \overline{QS}

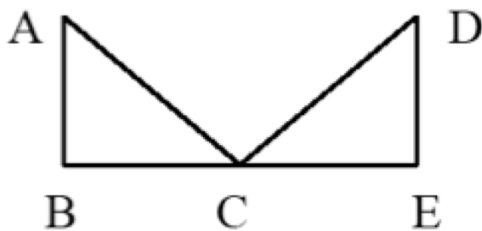


(2t) **Transformation Proof**

Describe a series of transformations that will show that the triangles below are congruent. Use the fact that $\overline{AB} \perp \overline{BE}$ and $\overline{DE} \perp \overline{BE}$, $\overline{AB} \cong \overline{DE}$ and $\angle BAC \cong \angle EDC$. Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the 3 points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

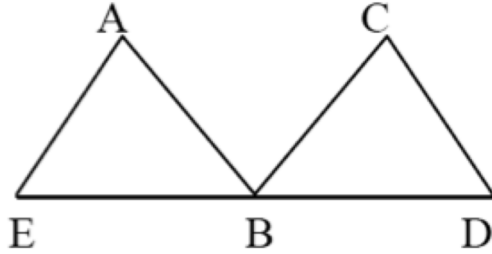

 (2e) **Euclidian Proof**

Write a series of "I know that . . . because . . ." statements that prove that the triangles below are congruent. Use the fact that $\overline{AB} \perp \overline{BE}$ and $\overline{DE} \perp \overline{BE}$, $\overline{AB} \cong \overline{DE}$ and $\angle BAD \cong \angle EDC$.

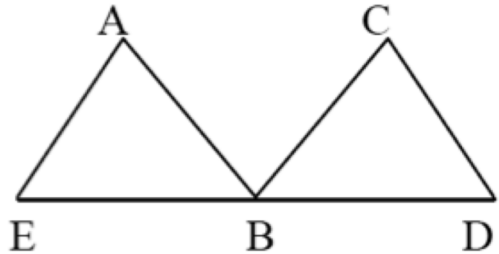


(3t) Transformation Proof

HW Describe a series of transformations that will show that the triangles below are congruent. Use the fact that $\overline{AE} \cong \overline{CB}$, $\overline{AB} \cong \overline{CD}$ and B is the midpoint of \overline{ED} . Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the three points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

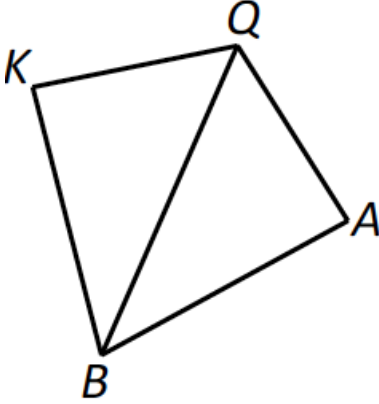
 (3e) Euclidian Proof

HW Write a series of "I know that . . . because . . ." statements that prove that the triangles below are congruent. Use the fact that $\overline{AE} \cong \overline{CB}$, $\overline{AB} \cong \overline{CD}$ and B is the midpoint of \overline{ED} .

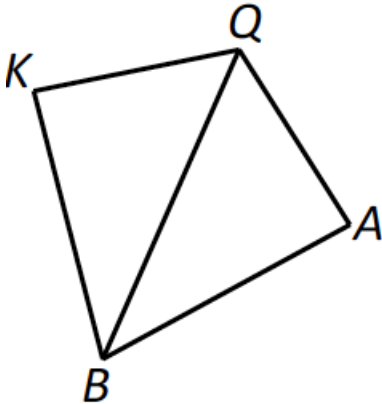


(4t) Transformation Proof

HW Describe a series of transformations that will show that the triangles below are congruent. Use the fact that $\overline{QK} \cong \overline{QA}$ and \overline{QB} bisects $\angle KQA$. Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the three points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

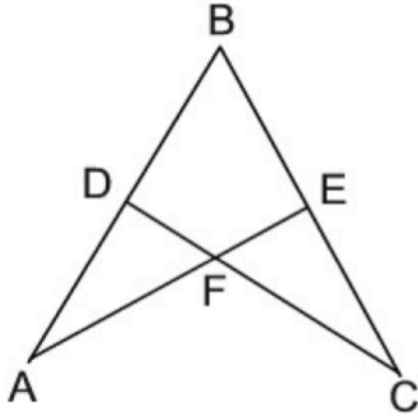
 (4e) Euclidian Proof

HW Write a series of "I know that . . . because . . ." statements to prove that $\overline{KB} \cong \overline{AB}$. Use the fact that $\overline{QK} \cong \overline{QA}$ and \overline{QB} bisects $\angle KQA$.

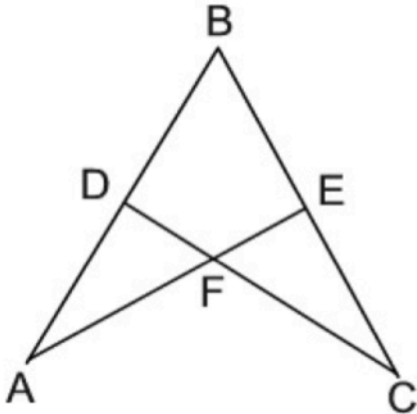


(5t) Transformation Proof

Describe a series of transformations that will show that $\triangle ABE \cong \triangle CBD$. Use the fact that $\overline{BD} \cong \overline{BE}$ and $\angle A \cong \angle C$. Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the three points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

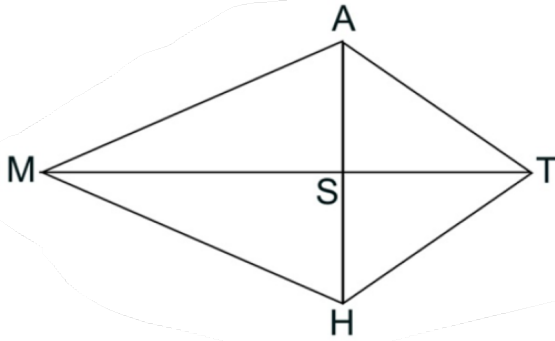
 (5e) Euclidian Proof

Write a series of "I know that . . . because . . ." statements that prove that $\overline{DC} \cong \overline{AF}$. Use the fact that $\overline{BD} \cong \overline{BE}$ and $\angle A \cong \angle C$

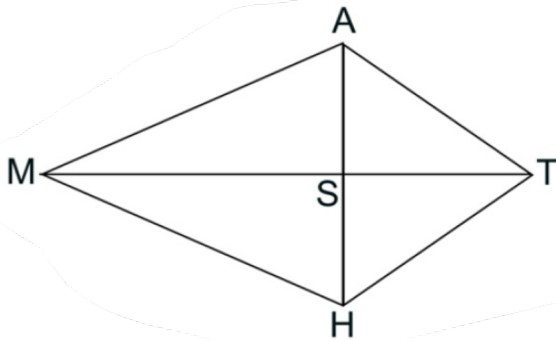


(6t) **Transformation Proof**

Describe a series of transformations that will show that the triangles below are congruent. Use the fact that $\overline{MA} \cong \overline{MH}$ and $\overline{AS} \cong \overline{HS}$. Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the 3 points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

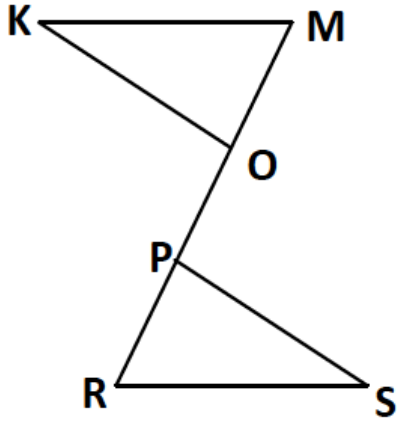
 (6e) **Euclidian Proof**

Write a series of "I know that . . . because . . ." statements that prove that \overline{MT} bisects $\angle ATH$. Use the fact that $\overline{MA} \cong \overline{MH}$ and $\overline{AS} \cong \overline{HS}$.

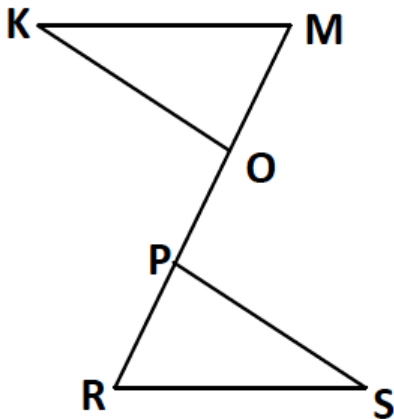


(7t) Transformation Proof

HW Describe a series of transformations that will show that the triangles below are congruent. Use the fact that $\angle M \cong \angle R$, $\angle RPS \cong \angle MOK$, and $\overline{MP} \cong \overline{RO}$. Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the 3 points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

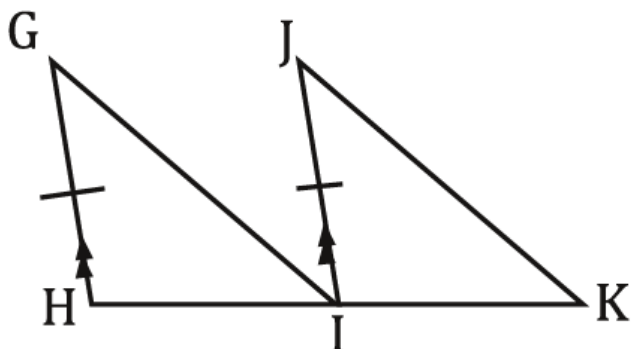

 (7e) Euclidian Proof

HW Write a series of "I know that . . . because . . ." statements that prove that $\overline{KM} \cong \overline{RS}$. Use the fact that $\angle M \cong \angle R$, $\angle RPS \cong \angle MOK$, and $\overline{MP} \cong \overline{RO}$.

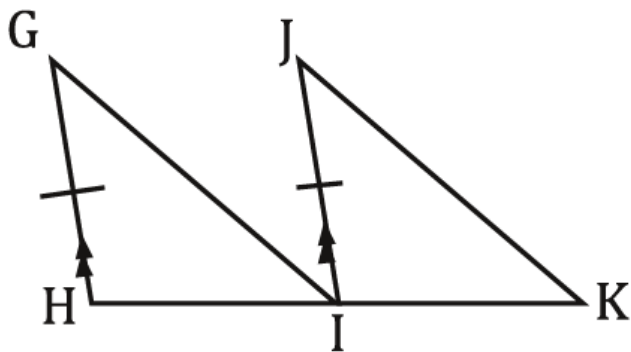


(8t) **Transformation Proof**

Describe a series of transformations that will show that the triangles below are congruent. Use the fact that $\overline{GH} \parallel \overline{JI}$ and I is the midpoint of \overline{HK} . Remember, that for 2 triangles to be congruent, there must be a sequence of transformations that will result in the three points of 1 triangle mapping to the three points of the other triangle. Marking the facts you know in the diagram will make it easier to choose useful transformations.

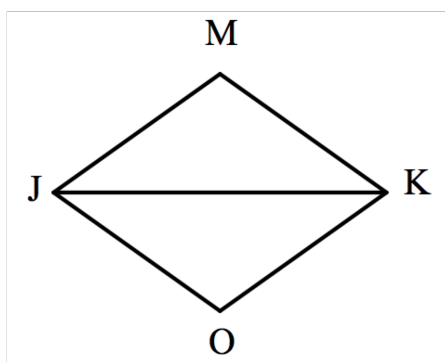

 (8e) **Euclidian Proof**

Write a series of "I know that . . . because . . ." statements to prove that $\overline{GI} \parallel \overline{JK}$. Use the fact that $\overline{GH} \parallel \overline{JI}$ and I is the midpoint of \overline{HK} .



(12) **Exit Ticket**

Write a Transformation or Euclidian proof. (If transformation, you must draw the diagram, use the givens, and prove that the triangles are congruent. If Euclidean, prove the statement written below.)



Given: $\overline{MK} \cong \overline{OK}$

\overline{KJ} bisects $\angle MKO$

Prove: \overline{KJ} bisects $\angle MJO$

 (13) **Homework**

Numbers 3, 4, and 7 from the lesson.