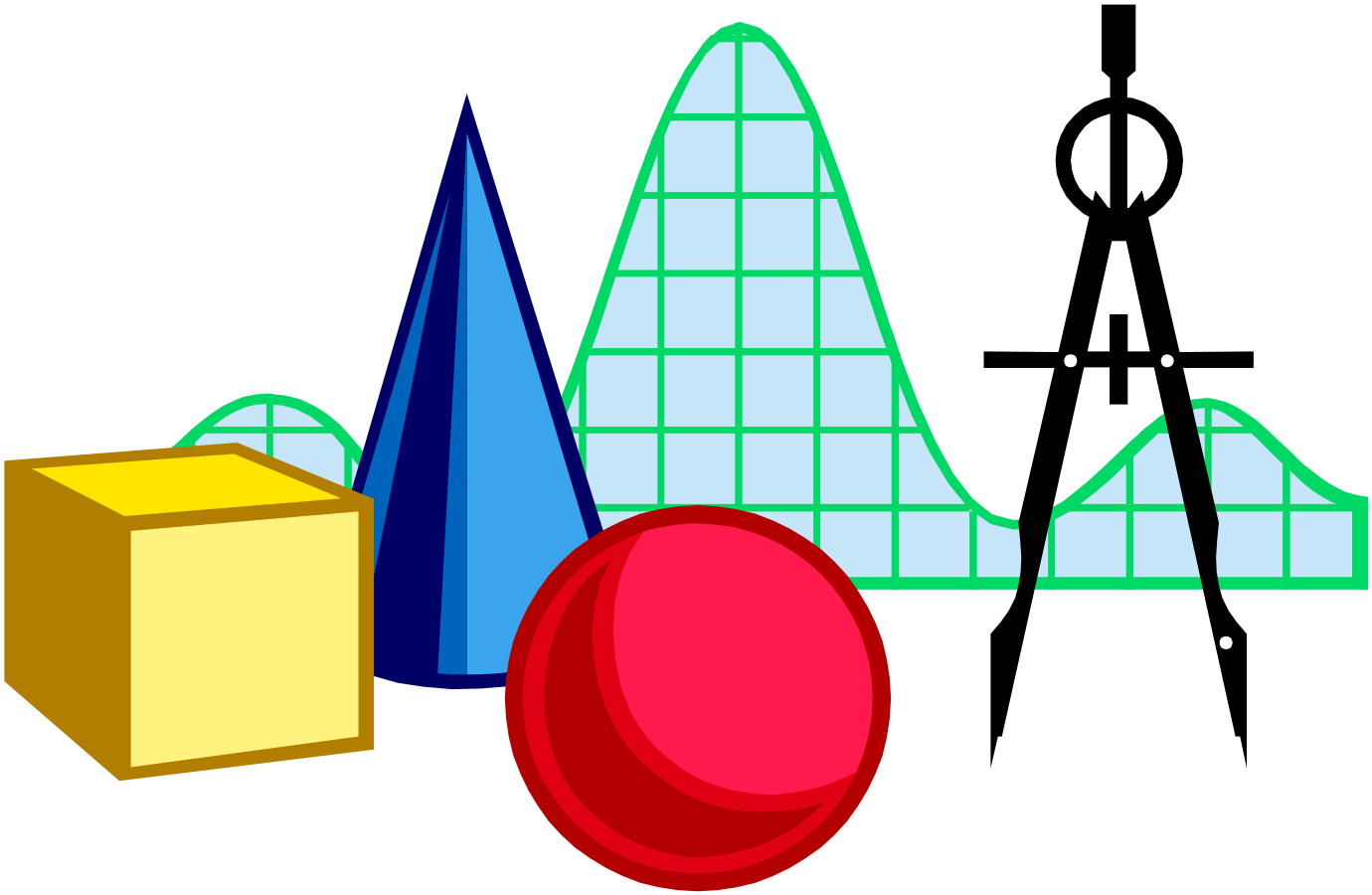
Welcome

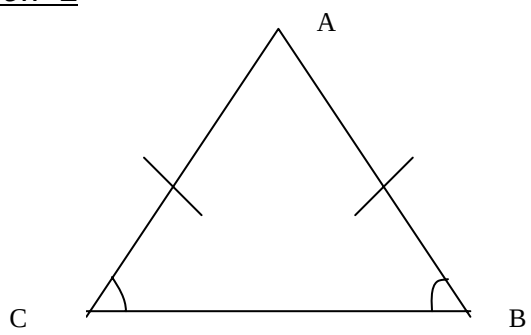
to



Geometric Proofs

ENTRY-TEST

Section 1

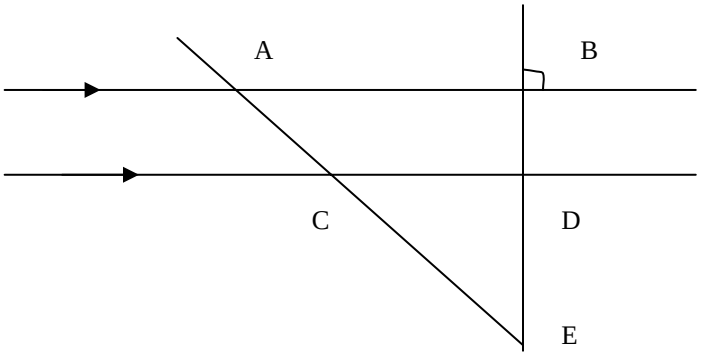


1. In the figure above, what do the slash marks on segments symbolize?

2. In the figure above, what do the arcs symbolize?

3. What type of triangle is the figure above?

Section 2



1. In the figure above, what do the arrows symbolize?

2. In the figure above, What does the box symbolize?

3. What type of triangle is Δ ABE?

Section 3

What do the following symbols represent?

1. $\cong$

2. $\perp$

3. $=$

4. $||$

5. $\angle$

6. Δ

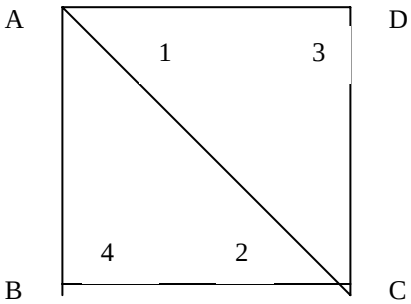
7. $\overline{AB}$

8. $m\angle$

Unit 1 ASSESSMENT

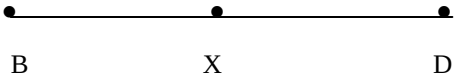
Section 1
Mark the following statements in the diagram below.

1. $\angle 1 \cong \angle 2$
2. $\angle 3 \cong \angle 4$
3. $\overline{AB} \cong \overline{DC}$
4. $\overline{AD} \cong \overline{BC}$
5. $AB \parallel CD$
6. $AD \perp DC$

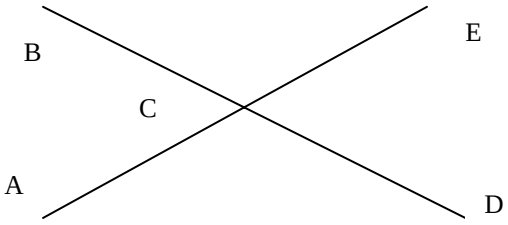


Section 2
Justify each of the following statements with a geometric postulate, definition, or theorem.

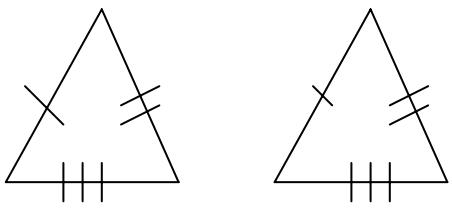
1. If X is the midpoint of $\overline{BD}$, then $\overline{DX} \cong \overline{BX}$.



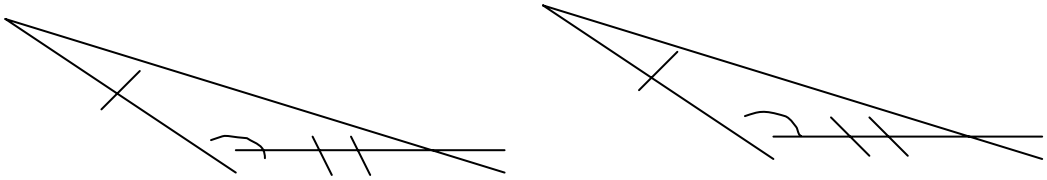
2. If $\angle BCA$ and $\angle ECD$ are vertical angles, then $\angle BCA \cong \angle ECD$.



3. If three corresponding segments of two triangles are congruent, then all the corresponding parts of the triangles are congruent.

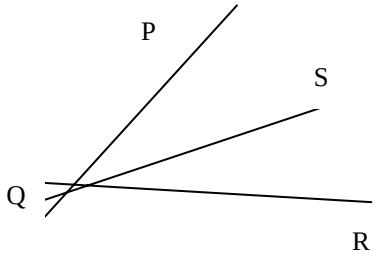


4. If two corresponding sides and their included angles are congruent in two triangles, then all the corresponding parts of the two triangles are congruent.

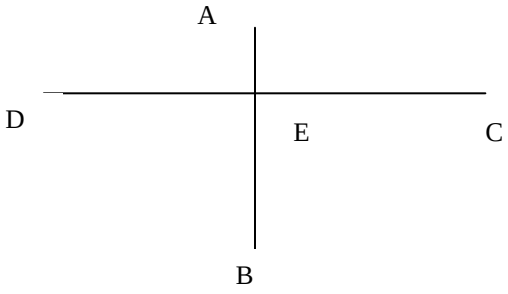


5. If two corresponding angles and their included side are congruent in two triangles, then all the corresponding parts of the two triangles are congruent.

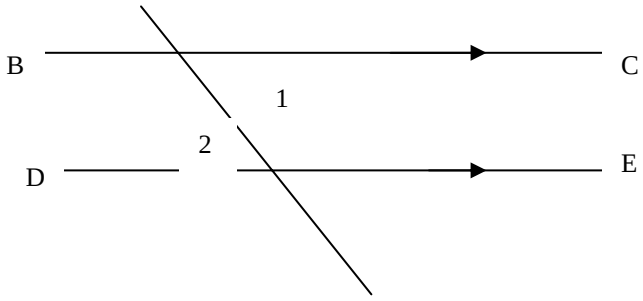
6. If $\overline{QS}$ bisects $\angle$ PQR, then $\angle$PQS $\cong$ $\angle$ SQR.



7. If AB bisects DC at point E, then DE $\cong$ EC.



8. If BC ∥ DE, then ∠ 1 ≅ ∠ 2.



Section 3

1. re-write the following paragraph proof in two-column form.

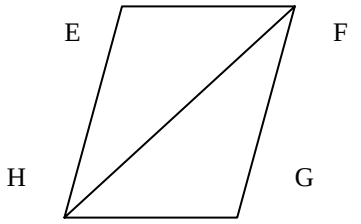
   "Given that M is the midpoint of AB, the measure of AM is equal to the measure of MB by definition of midpoint. AM must then be congruent to MB by definition of congruent segments."

Unit 2 ASSESSMENT

Section 1

Given: $\overline{EF} \cong \overline{GH}$ & $\overline{EH} \cong \overline{GF}$

Prove: $\Delta EFH \cong \Delta GHF$



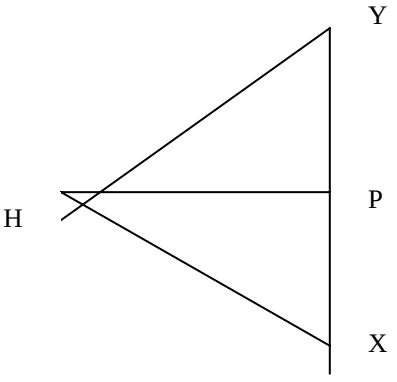
1. What is the given statement in the problem above?

2. What is supposed to be proven in the problem above?

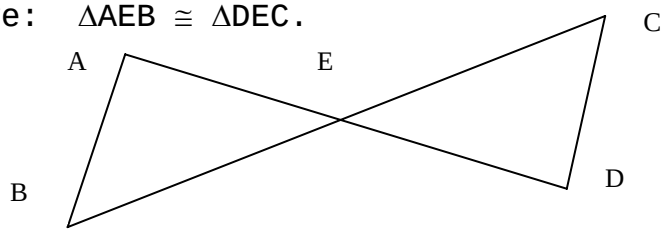
Section 2

Label the diagrams and identify the relationship between the given and prove statements by writing a conclusion in sentence form.

1. Given: $\overline{PH}$ bisects $\angle YHX$.
   $HP \perp YX$.
   Prove: $\Delta YHP \cong \Delta XHP$.



2. Given: BE bisects AD and $\angle A \cong \angle D$.
   Prove: $\Delta AEB \cong \Delta DEC$.



Unit 3 Assessment

Section 1

1. Draw a t-chart and label the two columns "statements" and "justifications" respectively.

Section 2

1. Enter the given statement and it's justification into the chart using the following information.

   Given: $\angle A \cong \angle B$ & $\angle 1 \cong \angle 2$.

Statements	Justifications

2. Enter the given statement and it's justification into the chart using the following information.

   Given: $\overline{AB}$ bisects $\overline{DC}$ & $\overline{AB} \perp \overline{DC}$

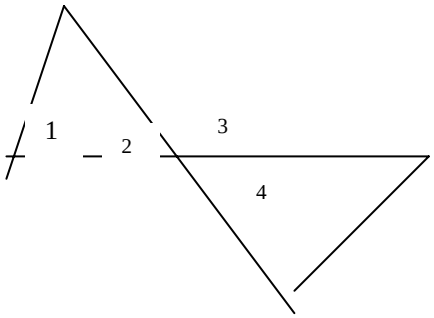
Statements	Justifications

Unit 4 Assessment

Section 1

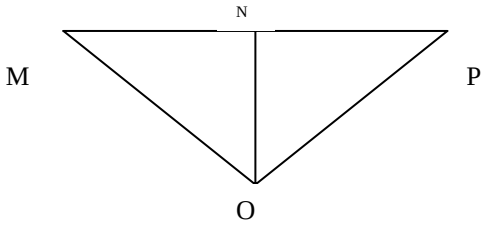
1. Write a conclusion about what can be assumed and why from the statement and diagram below.

   Given: $\angle 1 \cong \angle 2$



2. Write a conclusion about what can be assumed and why from the statement and diagram below.

   Given: $\overline{MO} \cong \overline{PO}$ & $\overline{NO}$ bisects $\overline{MP}$.



Section 2

Using your conclusion statements from problems 1 & 2 in The previous section, write the statements and justification in two-column format.

1.

Statements	Justifications
1. $\angle 1 \cong \angle 2$	1. Given

2.

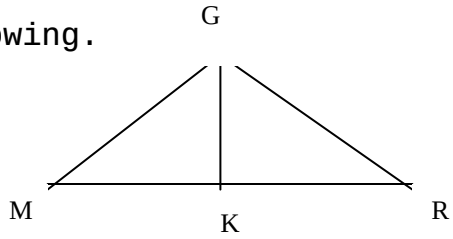
Statements	Justifications
1. MO ≅ PO & NO bisects MP	1. Given

Unit 5 Assessment

Section 1

Write a two-column proof for the following.

1. Given: $\overline{GK} \perp \overline{MR}$ & $\overline{GK}$ bisects $\overline{MR}$.
   Prove: $\Delta MGK \cong \Delta RGK$



2. Given: $\overline{RL} \cong \overline{DC}$ & $\overline{LC} \cong \overline{RD}$.
   Prove: $\Delta LDR \cong \Delta DCL$