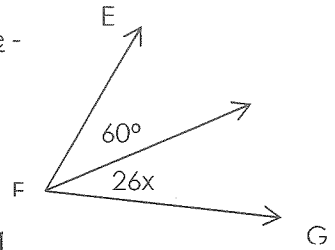
Name: _____

CCGPS Analytic Geometry
Unit 2A Practice

RECAP: Let's review what you have learned so far. These are the topics that will be covered on your test this FRIDAY.

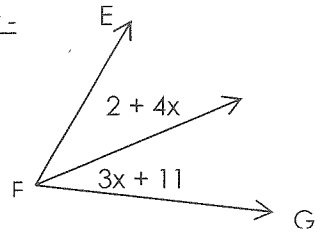
1. Angle addition postulate -

   m∠EFG = 56x



2. Angle bisector -

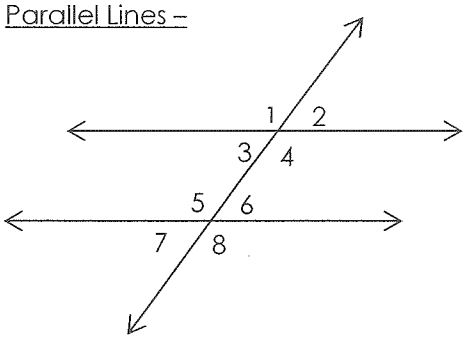
   Find x.



3. Segment addition postulate -

   WX = 2, YZ = 4, and WZ = 12.
   Find XY.

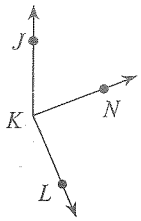
4. Parallel Lines –



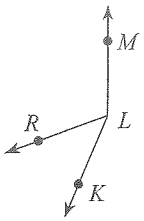
5. Postulates and Theorems used to prove triangle congruence –

ASA Postulate	AAS Theorem	SAS Postulate	SSS Postulate	HL Theorem	Vertical Angles	Reflexive Property	CPCTC

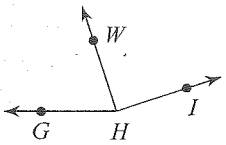
1) Find $m\angle NKL$ if $m\angle JKL = 157°$ and $m\angle JKN = 69°$.



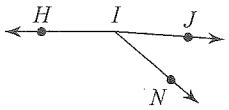
2) Find x if $m\angle KLM = 157°$, $m\angle KLR = x + 52$, and $m\angle RLM = x + 115$.



3) $m\angle GHW = 17x + 4$, $m\angle GHI = 41x - 2$, and $m\angle WHI = 90°$. Find $m\angle GHI$.

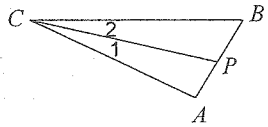


4) $m\angle NIH = 140°$, $m\angle JIN = 4x + 4$, and $m\angle JIH = 23x - 8$. Find $m\angle JIH$.

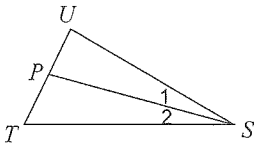


Each figure shows a triangle with one of its angle bisectors.

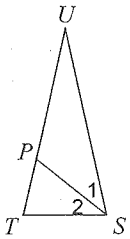
5) Find $m\angle 2$ if $m\angle ACB = 24°$.



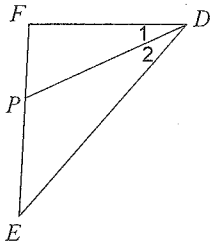
6) Find x if $m\angle 2 = 2x - 3$ and $m\angle 1 = x + 6$.



7) Find $m\angle UST$ if $m\angle 2 = 6x + 9$ and $m\angle 1 = 8x - 1$.

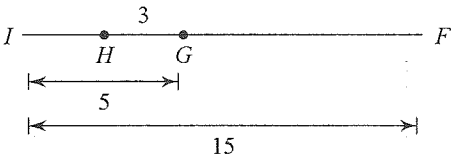


8) $m\angle 1 = 10 + 2x$ and $m\angle 2 = 4x - 4$. Find $m\angle FDE$.

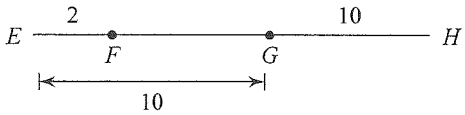


Find the length indicated.

9) Find HF

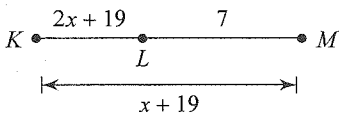


10) Find FH

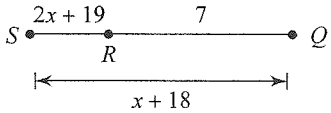


Solve for x.

11)

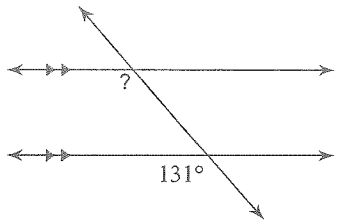


12)

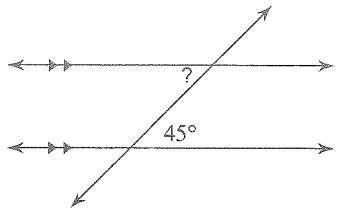


Find the measure of each angle indicated. Then state the relationship between the two angles using proper vocabulary.

13)

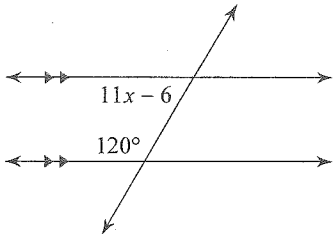


14)

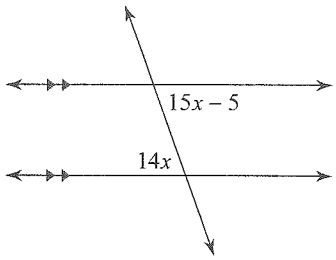


Solve for x. Then state the relationship between the two angles using proper vocabulary.

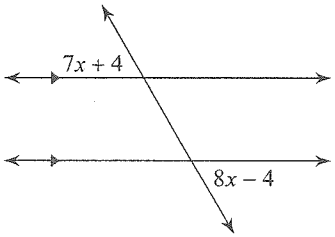
15)



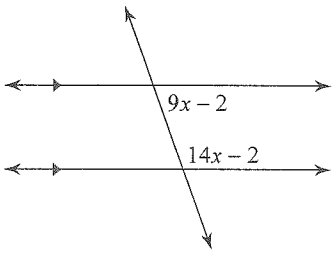
16)



17)

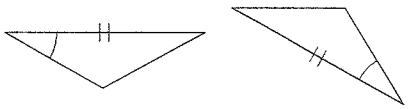


18)

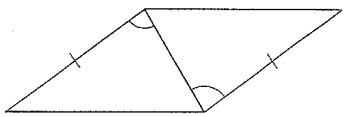


State if the two triangles are congruent. If they are, state how you know.

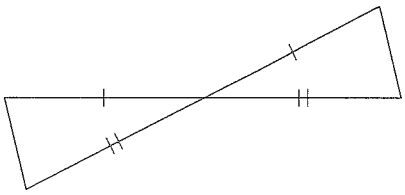
19)



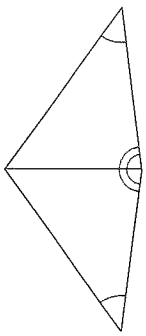
20)



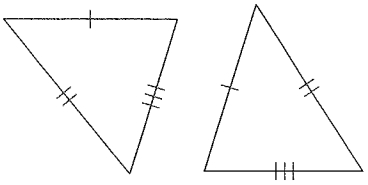
21)



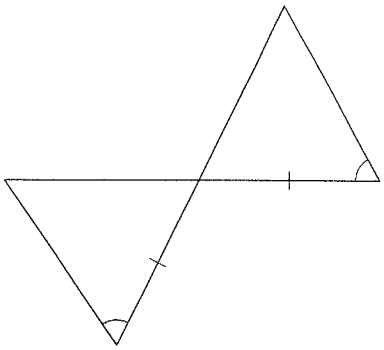
22)



23)

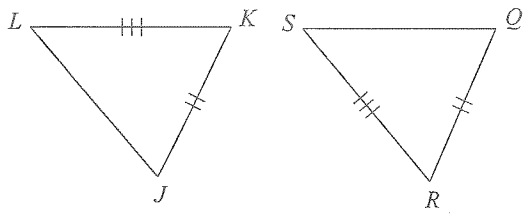


24)

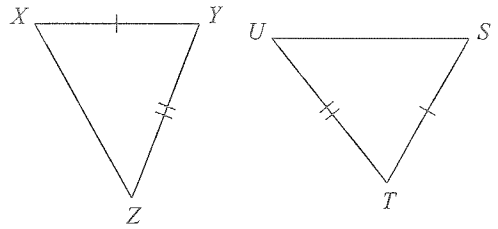


State what additional information is required in order to know that the triangles are congruent for the reason given.

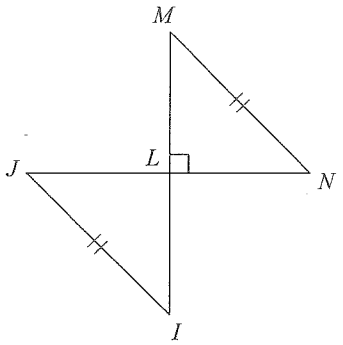
25) SAS



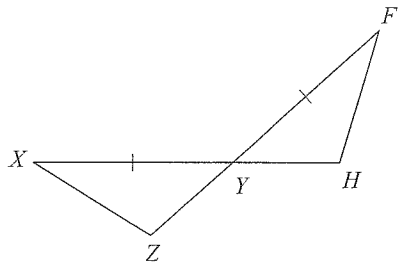
26) SSS



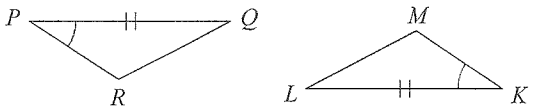
27) HL



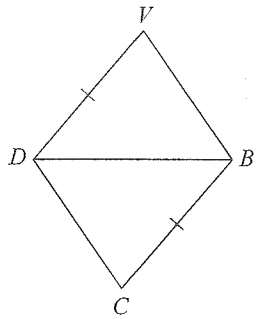
28) SAS



29) ASA

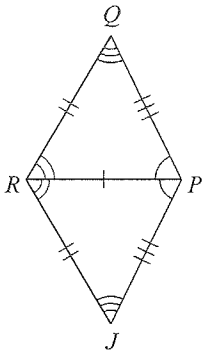


30) SSS

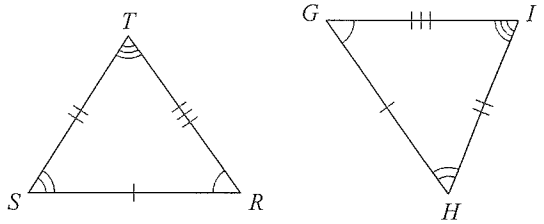


Write a statement that indicates that the triangles in each pair are congruent.

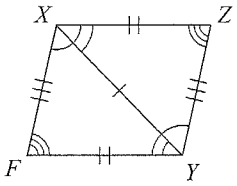
31)



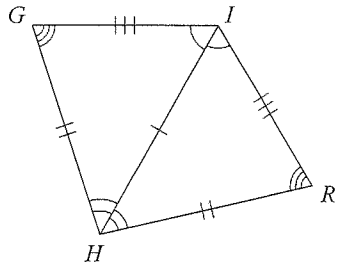
32)



33)

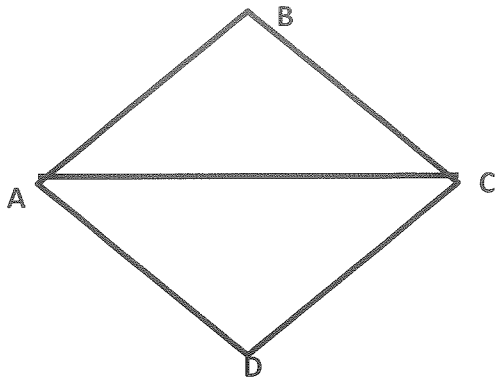


34)



Given: $\overline{BC} \cong \overline{CD}$ and $\overline{AC}$ bisects $\angle BCD$

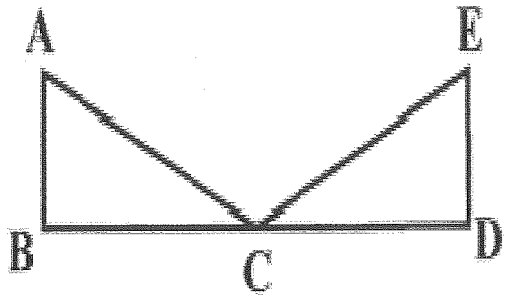
Prove: $\Delta ABC \cong \Delta ADC$



Statements	Reasons

Given: $\overline{AB} \cong \overline{ED}$, C is the midpoint of $\overline{BD}$, $\overline{AB} \perp \overline{BD}$ and $\overline{ED} \perp \overline{BD}$

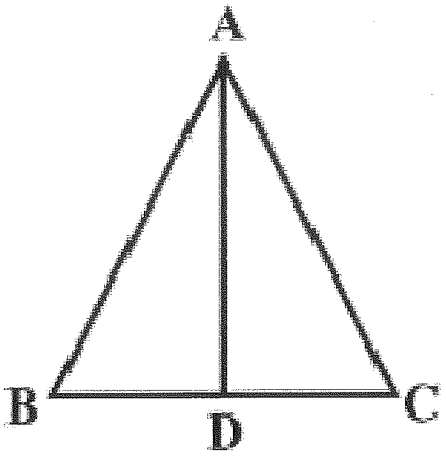
Prove: $\Delta ABC \cong \Delta EDC$



Statements	Reasons

Given: $\overline{AB} \cong \overline{AC}$ and $\overline{AD}$ bisects $\overline{BC}$

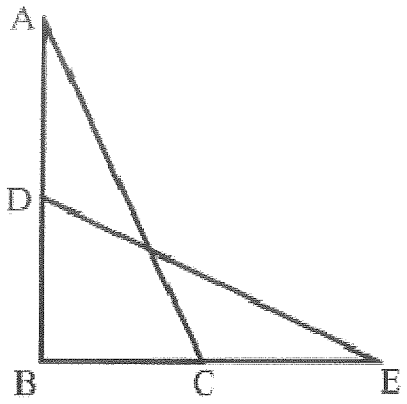
Prove: $\angle BAD \cong \angle CAD$



Statements	Reasons

Given: $\angle A \cong \angle E$ and $\overline{AB} \cong \overline{BE}$

Prove: $\overline{AD} \cong \overline{EC}$



Statements	Reasons