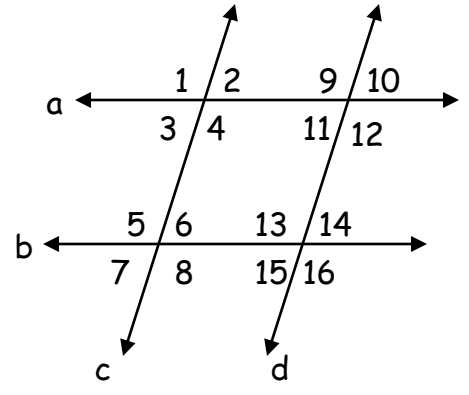


**Station 1-** You must complete the following proofs.  
Be sure to copy down the entire proof on your answer sheet.



1. Given: \_\_\_\_\_

Prove: \_\_\_\_\_

Statements	Reasons

Statements	Reasons

2. Given: \_\_\_\_\_

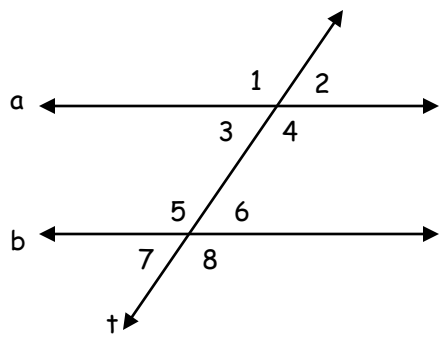
Prove: \_\_\_\_\_

**Station 2-** Using the Statement and Reason cards found in each envelope, put the steps to the proof in order.  
There will be several cards not used.

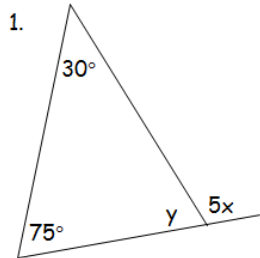
Given: \_\_\_\_\_

Prove: \_\_\_\_\_

Statements	Reasons



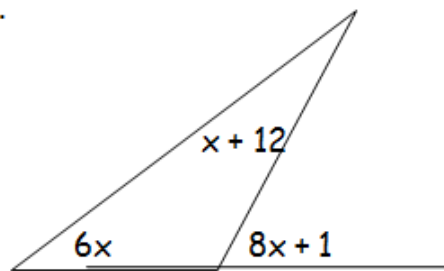
Station 3 - Complete each problem. Show all work, equations, and the diagram on your answer sheet. Find the indicated variables.



$x =$  \_\_\_\_\_

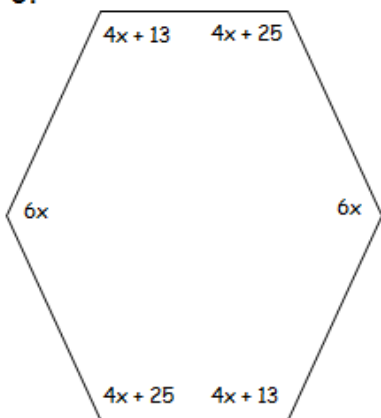
$y =$  \_\_\_\_\_

2.



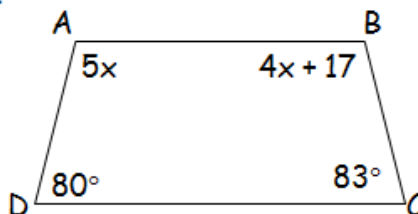
$x =$  \_\_\_\_\_

3.



$x =$  \_\_\_\_\_

4.



$x =$  \_\_\_\_\_

Is  $AB \parallel DC$ ? \_\_\_\_\_

Is  $AD \parallel BC$ ? \_\_\_\_\_

Station 4 - Answer the following questions.

1.)

Directions: Write the letter of the pair of described angles.



Alternate Interior Angles \_\_\_\_\_

A.  $\angle 10$  and  $\angle 11$

Same-side Interior Angles \_\_\_\_\_

B.  $\angle 6$  and  $\angle 3$

Corresponding Angles \_\_\_\_\_

C.  $\angle 16$  and  $\angle 6$

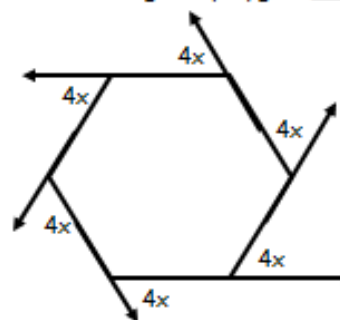
No Relationship \_\_\_\_\_

D.  $\angle 10$  and  $\angle 2$

2.)

$x =$  \_\_\_\_\_

Is this a regular polygon? \_\_\_\_\_



3. The sum of the interior angles of this polygon is 720.

How many sides does this polygon have? \_\_\_\_\_

What is the name of this polygon? \_\_\_\_\_

What is the sum of the exterior angles of the polygon? \_\_\_\_\_

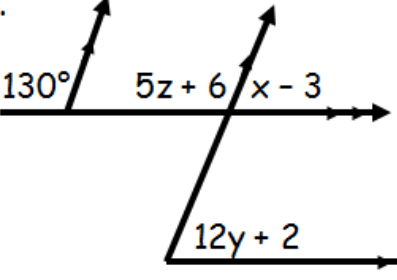
4. Each interior angle of a regular polygon has a measure of 150 degrees.

How many sides does this polygon have? \_\_\_\_\_

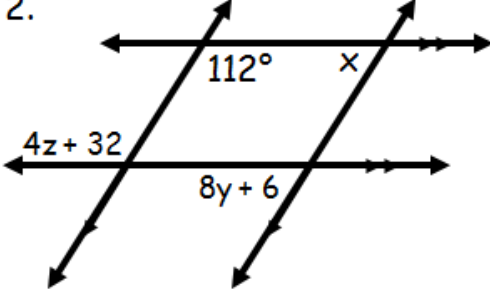
What is the name of this polygon? \_\_\_\_\_

What is the sum of the interior angles of the polygon? \_\_\_\_\_

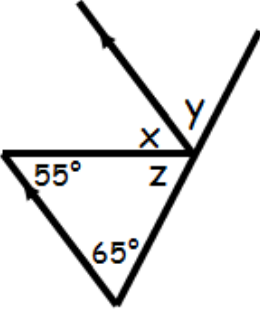
Station 5 - Complete each problem. Show all work, equations, and the diagram on your answer sheet. Find the indicated variables.

1. 

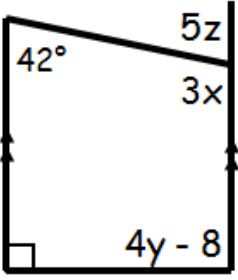
$x = \underline{\hspace{2cm}}$   
 $y = \underline{\hspace{2cm}}$   
 $z = \underline{\hspace{2cm}}$

2. 

$x = \underline{\hspace{2cm}}$   
 $y = \underline{\hspace{2cm}}$   
 $z = \underline{\hspace{2cm}}$

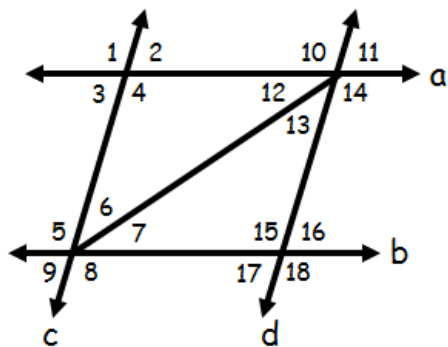
3. 

$x = \underline{\hspace{2cm}}$   
 $y = \underline{\hspace{2cm}}$   
 $z = \underline{\hspace{2cm}}$

4. 

$x = \underline{\hspace{2cm}}$   
 $y = \underline{\hspace{2cm}}$   
 $z = \underline{\hspace{2cm}}$

Station 6 - Based on the given information determine which lines, if any, are parallel. If any lines are parallel, state a justification.

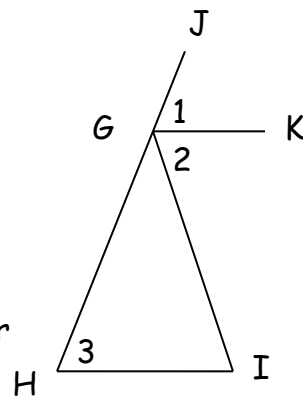


- 1.)  $m\angle 1 = m\angle 10$  \_\_\_\_\_
- 2.)  $m\angle 4 = m\angle 5$  \_\_\_\_\_
- 3.)  $m\angle 10 = m\angle 14$  \_\_\_\_\_
- 4.)  $m\angle 4 + m\angle 12 + m\angle 13 = 180$  \_\_\_\_\_
- 5.)  $m\angle 12 + m\angle 13 + m\angle 14 = 180$  \_\_\_\_\_
- 6.)  $m\angle 5 = m\angle 18$  \_\_\_\_\_
- 7.)  $m\angle 4 + m\angle 6 = 180$  \_\_\_\_\_
- 8.)  $m\angle 1 = m\angle 15$  \_\_\_\_\_
- 9.)  $m\angle 1 = m\angle 4$  \_\_\_\_\_
- 10.)  $m\angle 9 = m\angle 17$  \_\_\_\_\_

### Additional Proof Practice!!!

1. Given:  $GK$  bisects  $\angle JGI$ ;  $m\angle 3 = m\angle 2$

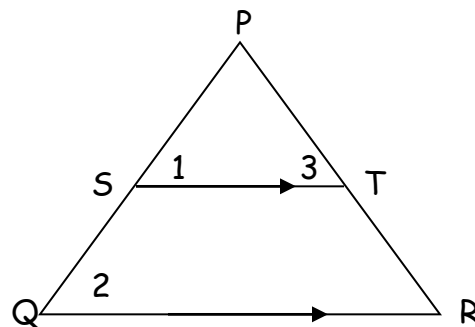
Prove:  $GK \parallel HI$



Statements	Reasons
1. _____	1. Given
2. _____	2. Definition of an Angle Bisector
3. _____	3. Given
4. $m\angle 1 = m\angle 3$	4. _____
5. _____	5. _____

2. Given:  $ST \parallel QR$ ;  $\angle 1 \cong \angle 3$

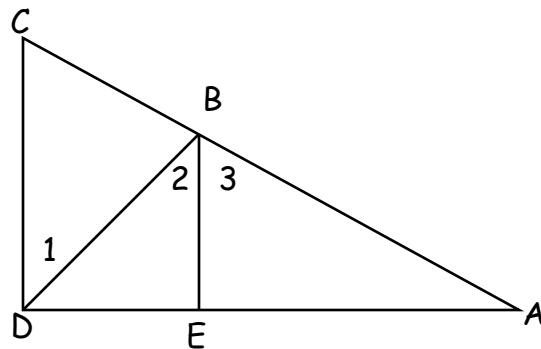
Prove:  $\angle 2 \cong \angle 3$



Statements	Reasons
1. $ST \parallel QR$	1. Given
2. $\angle 1 \cong \angle 2$	2. _____
3. _____	3. Given
4. _____	4. _____

3. Given:  $BE$  bisects  $\angle DBA$ ;  $\angle 1 \cong \angle 3$

Prove:  $CD \parallel BE$

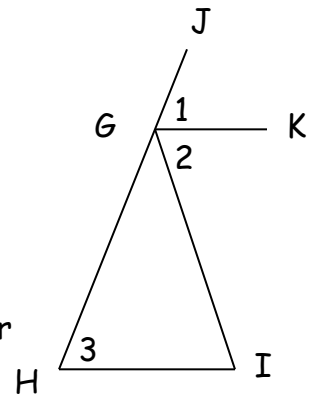


Statements	Reasons
1. $BE$ bisects $\angle DBA$	1. Given
2. $\angle 2 \cong \angle 3$	2. _____
3. _____	3. Given
4. _____	4. _____
5. _____	5. _____

### Additional Proof Practice!!! (KEY)

1. Given:  $GK$  bisects  $\angle JGI$ ;  $m\angle 3 = m\angle 2$

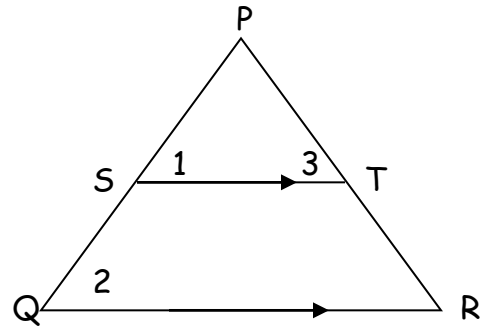
Prove:  $GK \parallel HI$



Statements	Reasons
1. $GK$ bisects $\angle JGI$	1. Given
2. $m\angle 1 = m\angle 2$	2. Definition of an Angle Bisector
3. $m\angle 3 = m\angle 2$	3. Given
4. $m\angle 1 = m\angle 3$	4. Substitution
5. $GK \parallel HI$	5. If 2 lines cut by trans and Corr $\angle \cong$ then $\parallel$ lines.

2. Given:  $ST \parallel QR$ ;  $\angle 1 \cong \angle 3$

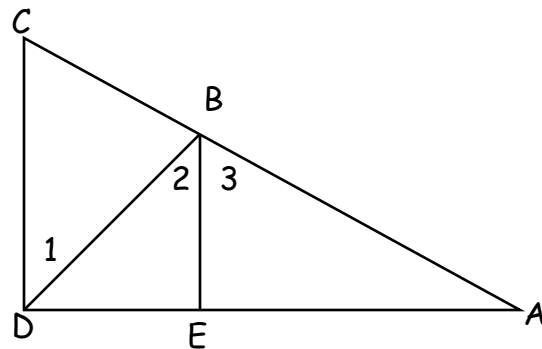
Prove:  $\angle 2 \cong \angle 3$



Statements	Reasons
1. $ST \parallel QR$	1. Given
2. $\angle 1 \cong \angle 2$	2. If $\parallel$ lines, then Corr $\angle \cong$
3. $\angle 1 \cong \angle 3$	3. Given
4. $\angle 2 \cong \angle 3$	4. Substitution

3. Given:  $BE$  bisects  $\angle DBA$ ;  $\angle 1 \cong \angle 3$

Prove:  $CD \parallel BE$



Statements	Reasons
1. $BE$ bisects $\angle DBA$	1. Given
2. $\angle 2 \cong \angle 3$	2. Def of Angle Bisector
3. $\angle 1 \cong \angle 3$	3. Given
4. $\angle 2 \cong \angle 1$	4. Substitution
5. $CD \parallel BE$	5. If 2 lines cut by trans and AI $\angle \cong$ , then $\parallel$ lines.