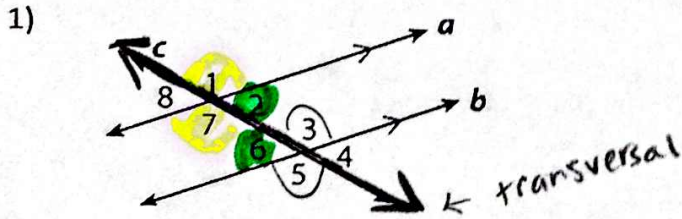


### Angles and Triangles Classwork

For numbers 1-2, follow these directions:

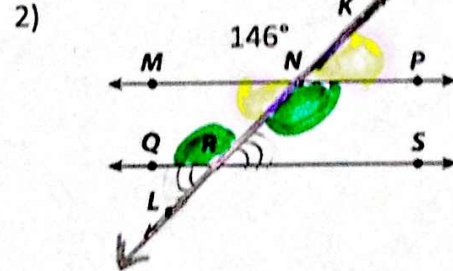
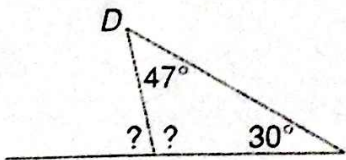
- Trace over the transversal with your pencil
- Highlight 1 pair of vertical angles yellow
- Highlight 1 pair of alternate interior angles green
- Make congruent markings on 1 pair of congruent angles



Use the figure in #1 to answer the questions below.

- 1a) What is the relationship between  $\angle 3$  and  $\angle 7$ ?  
Alternate interior angles; congruent
- 1b) What is the relationship between  $\angle 4$  and  $\angle 6$ ?  
Vertical angles; Congruent
- 1c) Name 2 different pairs of supplementary angles.  
 $\angle 1 + \angle 8$  ;  $\angle 3 + \angle 6$   
3-4

For numbers 3, 4, use the figure below.



Use the figure in #2 to answer the questions below.

- 2a) What is measure of  $\angle KNP$ ?  
34°
- 2b) What is the measure of  $\angle PNR$ ?  
146° (because  $\angle KNP + \angle PNR$  are vertical, they are  $\cong$ )
- 2c) What is the measure of  $\angle SRL$ ?  
146° (

$$\begin{array}{r} 180 \\ - 146 \\ \hline 34 \end{array}$$

3) What is the measure the exterior angle?

$$180 - 103 = 77^\circ$$

4) What is the measure of the missing interior angle?

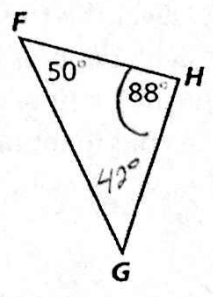
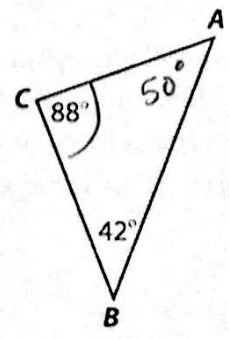
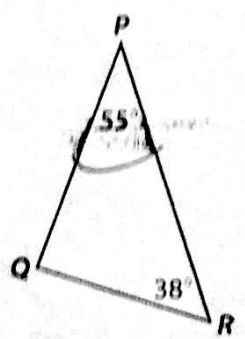
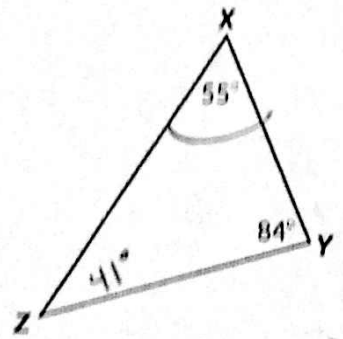
$$180 - (47 + 30) = 103^\circ$$

5-6

Use Set A and Set B to answer questions ~~20-21~~.

Set A:

Set B:



$\angle Z = 180 - (55 + 84)$

$\angle Z = 180 - 139$   
 $\angle Z = 41^\circ$

$\angle A = 180 - (42 + 88)$

$\angle A = 180 - 130$

$\angle A = 50^\circ$

$\therefore \angle G = 42^\circ$

5) Does Set A show similar triangles? NO Explain how you know.

There are not two congruent angles in the triangles in Set A.

6) Does Set B show similar triangles? YES Explain how you know.

$\angle A \cong \angle F$  (both are  $50^\circ$ ) and

$\angle C \cong \angle H$  (both are  $88^\circ$ ).

By Angle Angle Similarity, these two triangles are similar.

