Grade 8 - Week 4

Name: _____ Gr. & Sec.: _____

Name of Teacher: _____ Score: _____

MASTER ME

Most Essential Learning Competency: Proves properties of parallel lines cut by a transversal.

At the end of this activity sheet, you are expected to:
  a. identify and Illustrate parallel lines and transversal lines; and
  b. proves properties of parallel lines cut by a transversal.

Transversal line – a line that intersects two coplanar lines at two distinct points
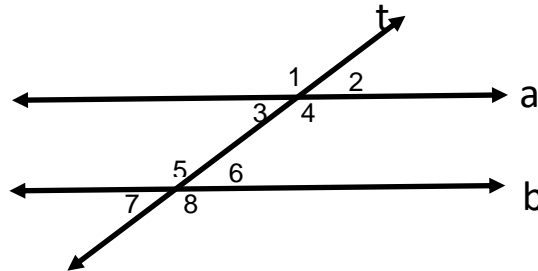
In the figure, line **t** is the transversal.

If two lines are cut by a transversal, then the following pairs of angles will be formed:

- **Corresponding angles -** pair of angles which are in corresponding positions relative to the two lines and the transversal
- **Alternate interior angles -** two nonadjacent interior angles that are on opposite sides of the transversal
- **Alternate exterior angles -** two non adjacent exterior angles that are on opposite sides of the transversal
- **Same-side interior angles –** two interior angles that are on the same side of the transversal
- **Same-side exterior angles –** two exterior angles that are on the same side of the transversal

Two lines cut by a transversal line are parallel when the:
- corresponding angles are congruent.
- alternate interior angles are congruent.
- alternate exterior angles are congruent.
- same-side interior angles are supplementary.
- same-side exterior angles are supplementary.

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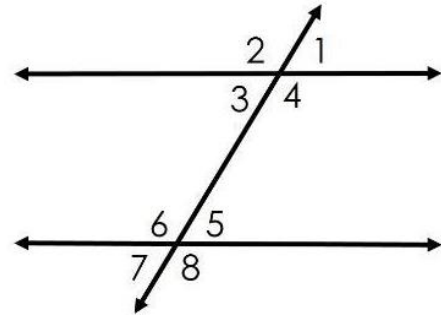
ACT ON

Direction: With the figure at the right, tell whether the given angle pairs formed are **corresponding angles**, **alternate interior angles** or **alternate exterior angles**. Write your answer on the space provided.
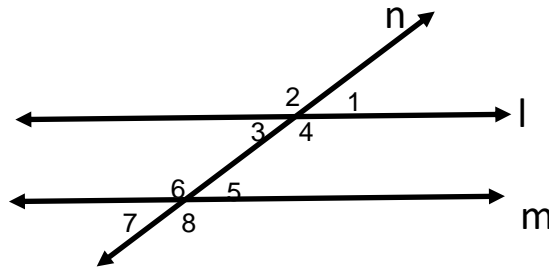
1. ∠1 and ∠5 _____

2. ∠3 and ∠7 _____

3. ∠1 and ∠7 _____

4. ∠3 and ∠5 _____

5. ∠2 and ∠8 _____

TRY MORE

Direction: Complete the following proof and state the theorem used based on the result.

Given: l ∥ m, n is a transversal of l and m
Prove: ∠1 ≅ ∠7 ; ∠2 ≅ ∠8

Statements	Reason
1. l ∥ m	1. given
2. ∠1 and ∠5 ; ∠2 and ∠6 are pairs of corresponding angles	2.
3. ∠1 ≅ ∠5 ; ∠2 ≅ ∠6	3.
4.	4. definition of vertical angles
5. ∠5 ≅ ∠7 ; ∠6 ≅ ∠8	5.
6.	6.

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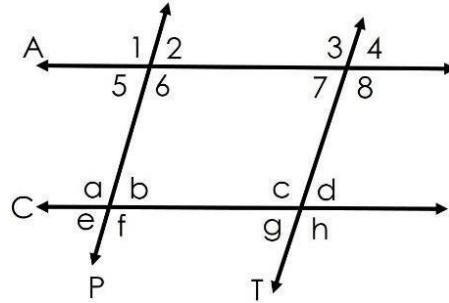Edited & Reviewed by: Mercy I. Bisayas & Katherine D. Rezare / GFMNHS Main

HARNESS SKILL

Direction: Prove the given statement below. Write your answer on the space provided

Given: A∥C ; P∥T

Prove: ∠1 ≅ ∠h

Statements	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.