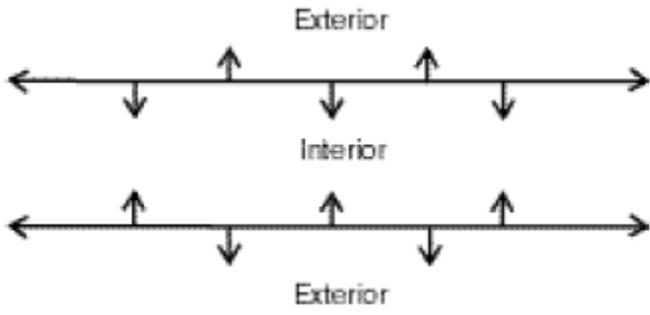


Look at the definitions below, and choose the word from the bank that you believe refers to every definition:

- 1) something that **lies across** something else: _____
- 2) every other one: _____
- 3) inside: _____
- 4) outside: _____
- 5) next to each other: _____
- 6) across from each other, and sharing a **vertex**: _____
- 7) matching: _____
- 8) never cross: _____
- 9) two: _____
- 10) have the shape of a line: _____

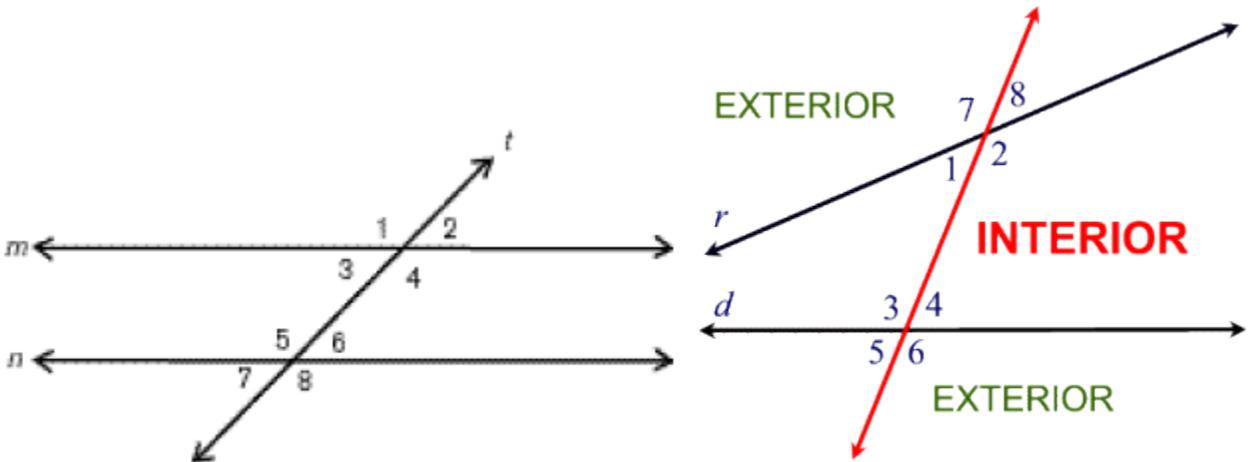
- Alternate
- Consecutive
- Corresponding
- Exterior
- Interior
- Linear
- Pair
- Parallel
- Transversal
- Vertical

When two lines are given in a figure, there are two main areas: the _____ and the _____.



Transversal

When two lines are cut by a third line, the third line is called the _____. In the example to the left below, lines *m* and *n* are cut by a transversal line, *t*. Notice that even when cut by a transversal, the interior and the exterior areas of the lines remain.

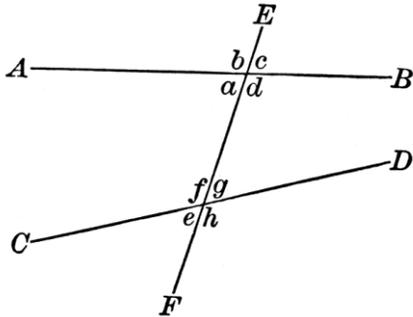


In the examples above, eight angles are formed when the transversal. Many pairs of angles are related to each other.

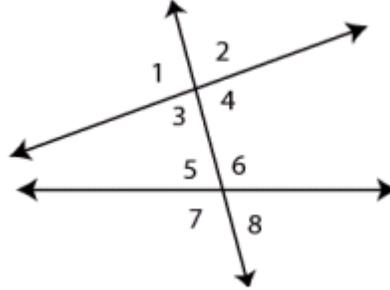
Angle Relationships**Linear pairs**

Any _____ angles that are next to each other and form a _____ are called a _____.

Example 1: Name all the angles that form a linear pair in the diagram below.

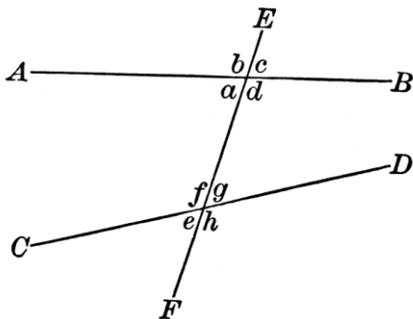


Practice 1: Name all the angles that form a linear pair in the diagram below.

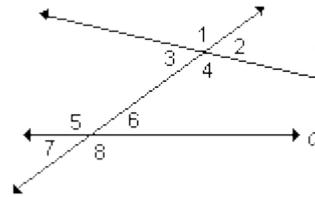
**Vertical angles**

Any pairs of angles that are across from each other and sharing the same vertex are called _____.

Example 2: Name all the pairs of vertical angles in the diagram below.

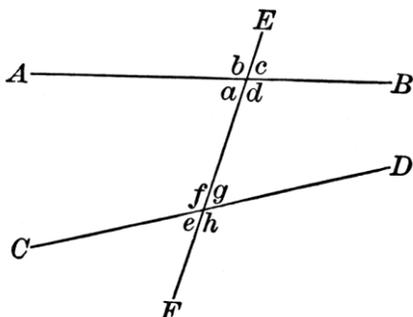


Practice 2: Name all the pairs of vertical angles in the diagram below.

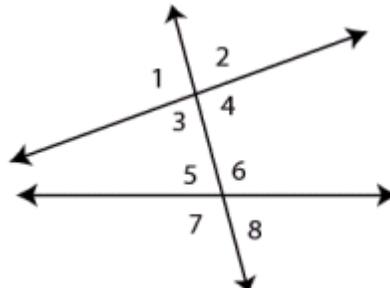
**Consecutive Interior Angles**

Any pairs of angles that are next to each other in the _____ region on the same side of the _____ are called _____.

Example 3: Name all the pairs of consecutive interior angles in the diagram below.



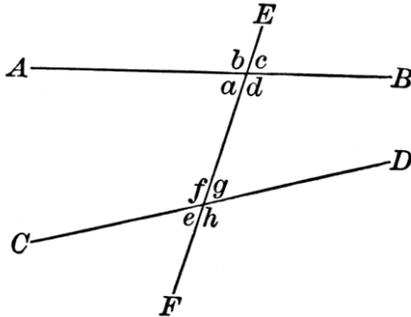
Practice 3: Name all the pairs of consecutive interior angles in the diagram below.



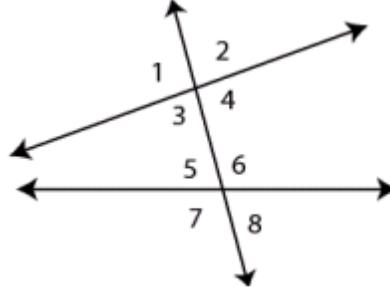
Alternate Interior Angles

Any pairs of angles that are _____ of each other in the _____ region are called _____.

Example 4: Name all the pairs of alternate interior angles in the diagram below.

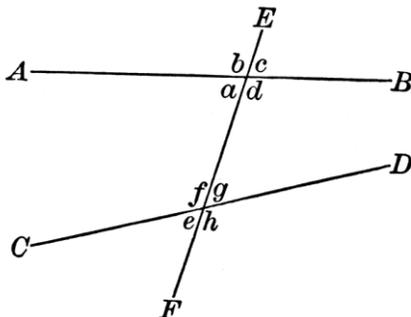


Practice 4: Name all the pairs of alternate interior angles in the diagram below.

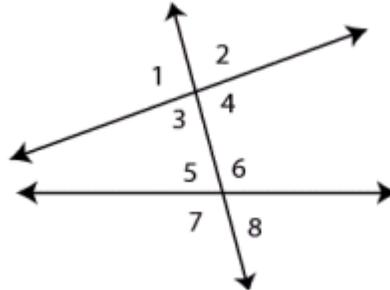
**Alternate Exterior Angles**

Any pairs of angles that are _____ of each other in the _____ region are called _____.

Example 5: Name all the pairs of alternate exterior angles in the diagram below.

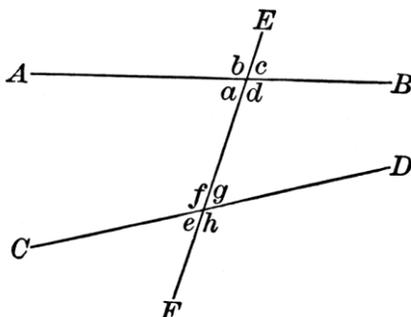


Practice 5: Name all the pairs of alternate exterior angles in the diagram below.

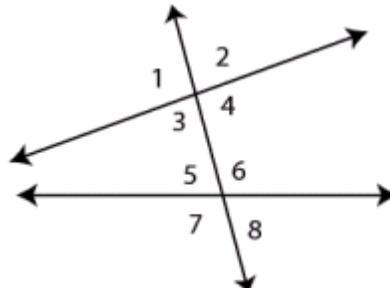
**Corresponding Angles**

If you look at the group of four angles formed in every line intersection, and look at the position of every angle (top left, top right, bottom left, bottom right), the angles in every group that match in location are called _____.

Example 6: Name all the pairs of corresponding angles in the diagram below.

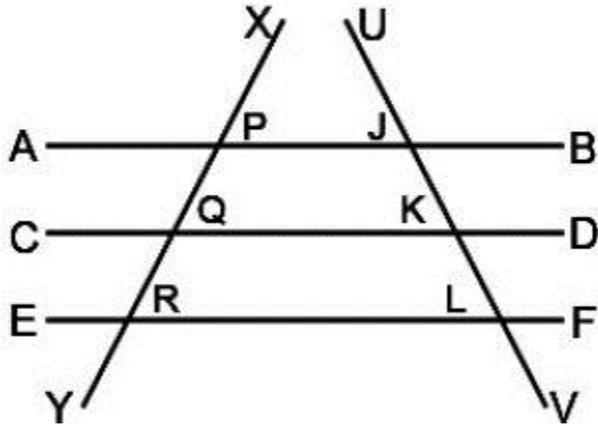


Practice 6: Name all the pairs of corresponding angles in the diagram below.



The same relationships still exist whenever you have more than two lines cut by a transversal, or even cut by more than one transversal. You just have to look at one pair of lines at a time to determine the relationship between the angles, and refer to the transversal that they have in common.

Example: List the relationship between the given pairs of angles:



$\angle APX$ and $\angle RQK$: _____

$\angle JPQ$ and $\angle LRP$: _____

$\angle UJB$ and $\angle KLF$: _____

$\angle PJK$ and $\angle FLK$: _____

$\angle UJB$ and $\angle BJK$: _____

$\angle CQR$ and $\angle KQP$: _____

Practice: List the relationship between the given pairs of angles:

7) $\angle JKQ$ and $\angle LKD$: _____

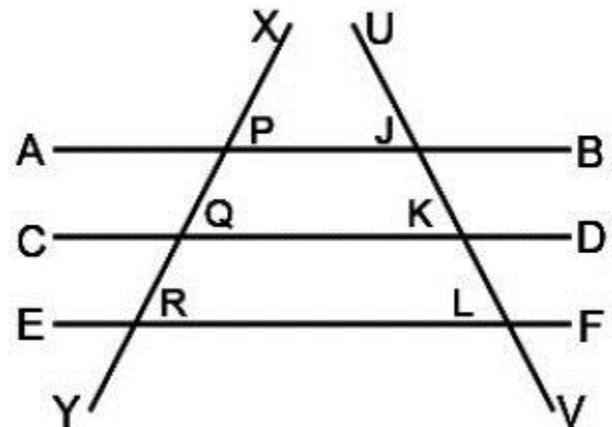
8) $\angle UJP$ and $\angle VLF$: _____

9) $\angle PJL$ and $\angle RLJ$: _____

10) $\angle QKJ$ and $\angle DKJ$: _____

11) $\angle APX$ and $\angle QPJ$: _____

12) $\angle FLJ$ and $\angle PJL$: _____



Practice:

List all the pairs of angles requested of the figure to the right.

13) Linear pairs: _____

14) Vertical angles: _____

15) Alternate interior angles: _____

16) Alternate exterior angles: _____

17) Consecutive interior angles: _____

