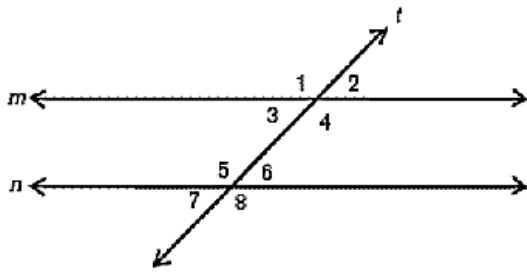


Day 4 – Lines and Transversals

- Two lines are _____ if they are coplanar and do not intersect.
- Lines that do not intersect and are not coplanar are called _____.
- _____ lines are two lines that intersect at a right angle.
- A _____ is a line that intersects two or more coplanar lines at different points.

Alternate Exterior Angles



Definition:

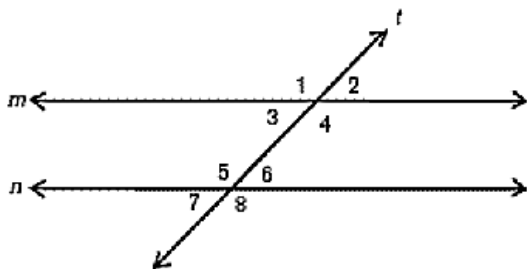
Two angles in the _____ of the parallel lines and on _____ sides.

Alternate Exterior Angles Theorem:

If 2 _____ are cut by a transversal, then the pairs of alternate exterior angles are _____.

Other Alternate Exterior Angles:

Alternate Interior Angles



Definition:

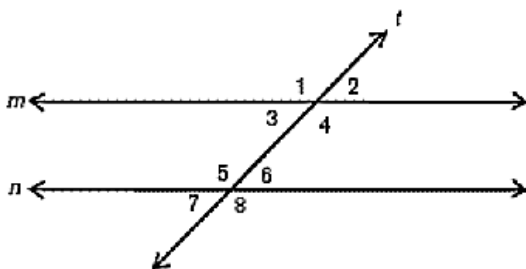
Two angles in the _____ of the parallel lines and on _____ sides.

Alternate Interior Angles Theorem:

If 2 parallel lines are cut by a transversal, then the pairs of alternate interior angles are _____.

Other Alternate Interior Angles:

Consecutive (Same Side) Exterior Angles



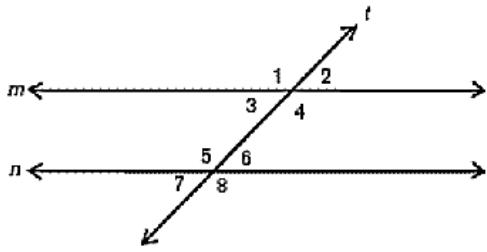
Definition:

Two angles in the _____ of the parallel lines and on _____ sides.

Consecutive (Same Side) Exterior Angles Theorem:

If 2 parallel lines are cut by a transversal, then the pairs of consecutive exterior angles are _____.

Other Same Side Exterior Angles:

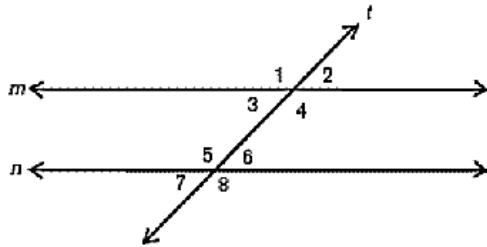
Consecutive (Same Side) Interior Angles**Definition:**

Two angles in the _____ of the parallel lines and on _____ sides.

Consecutive (Same Side) Interior Angles Theorem:

If 2 parallel lines are cut by a transversal, then the pairs of consecutive interior angles are _____.

Other Same Side Interior Angles:

Corresponding Angles**Definition:**

Two angles that lie in the _____.

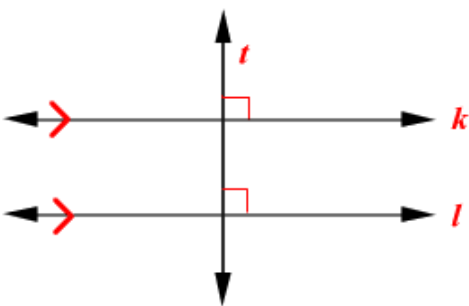
Corresponding Angles Postulate:

If 2 parallel lines are cut by a transversal, then the pairs of corresponding angles are _____.

Other Corresponding Angles:

Perpendicular Transversal Theorem:

If a transversal is perpendicular to one of the two parallel lines, then it is _____ to the other.

**Legend:**

\perp Perpendicular (90 degrees)

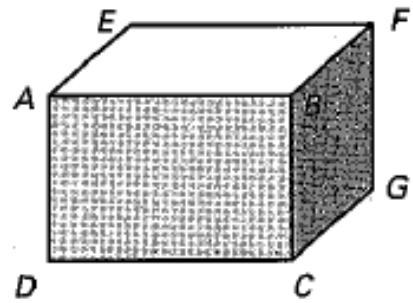
\parallel Parallel

If $k \parallel l$ and $t \perp k$, then $t \perp l$.

Think of each segment in the diagram as part of a line.

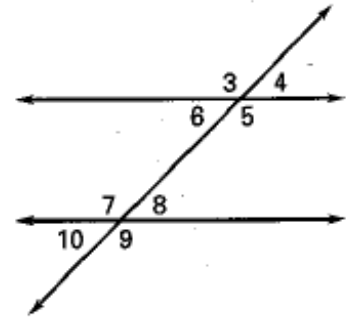
Identify the segments as parallel, skew, or perpendicular.

1. AB and DC
2. AB and BC
3. BF and FG
4. AB and FG

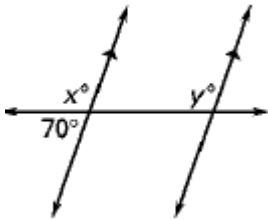


Identify the angles as corresponding, alternate interior, alternate exterior, or consecutive interior.

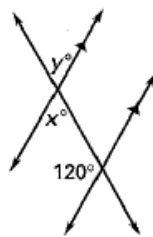
- | | |
|-------------------------------|-------------------------------|
| 5. $\angle 3$ and $\angle 7$ | 8. $\angle 8$ and $\angle 6$ |
| 6. $\angle 4$ and $\angle 10$ | 9. $\angle 9$ and $\angle 5$ |
| 7. $\angle 5$ and $\angle 8$ | 10. $\angle 5$ and $\angle 7$ |



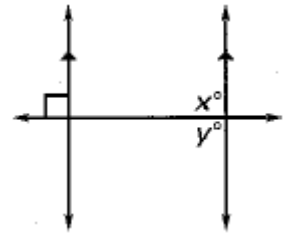
11.



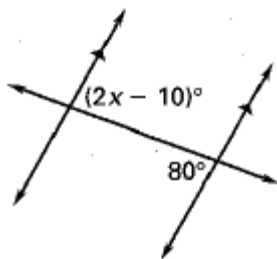
12.



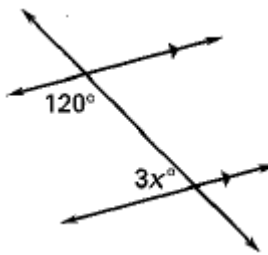
13.



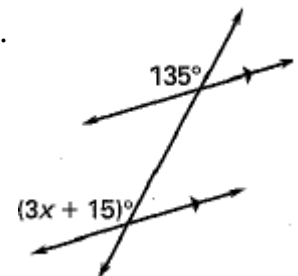
14.



15.

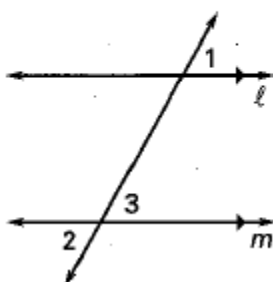


16.



17. Given: $\ell \parallel m$

Prove: $\angle 1 \cong \angle 2$



STATEMENT

REASON