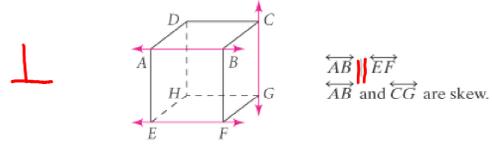


Objectives: You will be able to identify the relationship between two lines or two planes and you will be able to name angles formed by a pair of lines and a transversal.

Parallel lines: Two lines that **never** intersect.

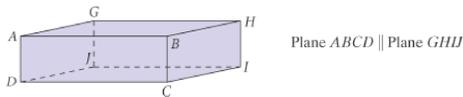


Skew lines: Two lines that do not lie in the same plane. They are not parallel and do not intersect

Nov 13-2:38 PM

Mar 4-8:00 PM

Parallel planes: Two planes that do not intersect.



Mar 4-8:11 PM

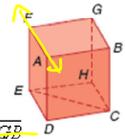
Example 1: Use the figure to answer the following questions.

a) Name all planes that are parallel to plane ABGF.

Plane EDC H

b) Name all the segments that intersect \overline{EH}

\overline{FE} \overline{GH} \overline{DE}
 \overline{EC} \overline{CH}



c) Name all the segments that are parallel to \overline{GB}

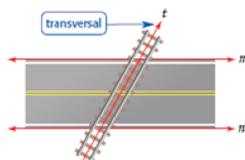
\overline{HC} \overline{FA} \overline{ED}

d) Name all the segments that are skew to \overline{FA}

\overline{EC} \overline{DC} \overline{BC} \overline{HG}

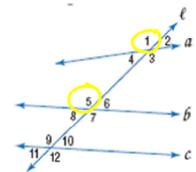
Nov 13-2:38 PM

Transversal: A line that intersects two or more lines.



Nov 13-2:42 PM

$\angle 1$ and $\angle 5$ are a pair of **Corresponding Angles**.



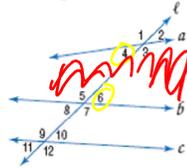
These are angles that can be found in "the same spot".

→ Name the other pairs of corresponding angles in the picture:

$\angle 4$ & $\angle 8$ $\angle 5$ & $\angle 9$
 $\angle 12$ & $\angle 7$ $\angle 2$ & $\angle 6$

May 23-7:43 AM

L4 and L6 are a pair of **Alternate Interior Angles**.



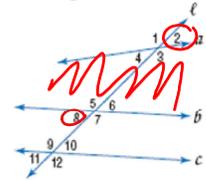
These are angles that can be found **in between** the two lines that are cut by the transversal, on opposite sides of the transversal with one up and one down.

→ Name two other pairs of alternative interior angles in the picture above:

$\angle 8 \text{ and } \angle 10$ $\angle 9 \text{ and } \angle 7$

May 23-7:43 AM

L2 and L8 are a pair of **Alternate Exterior Angles**.



These are angles that can be found **outside** of the two lines that are cut by the transversal, on opposite sides of the transversal, with one up and one down.

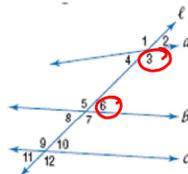
Name two others pair of alternative exterior angles in the picture:

$\angle 5 \text{ and } \angle 12$
 $\angle 11 \text{ and } \angle 6$

May 23-7:43 AM

L3 and L6 are a pair of **Consecutive Interior Angles**.

Same-Side in t



These are angles that can be found **in between** the two lines that are cut by the transversal, on the same side of the transversal.

→ Name two other pairs of same-side interior angles in the picture:

$\angle 9 \text{ and } \angle 8$
 $\angle 5 \text{ and } \angle 4$

May 23-7:43 AM

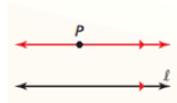
Example 2: Juanita and Eric are naming alternate interior angles in the figure at the right. One of the angles must be L4. Who is correct? Explain your reasoning.

Juanita $\angle 4$ and $\angle 9$ $\angle 4$ and $\angle 6$	Eric $\angle 4$ and $\angle 10$ $\angle 4$ and $\angle 5$
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Same-Side Int

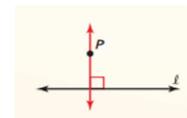
Nov 13-2:42 PM

Parallel Postulate: If there is a line and point not on the line, then there is exactly one line through the point **parallel to the given line**



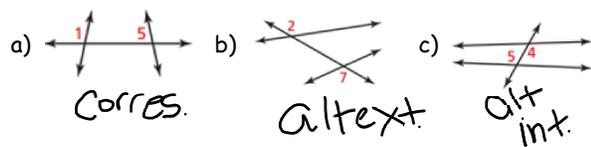
Nov 15-1:10 PM

Perpendicular Postulate: If there is a line and point not on the line, then there is exactly one line through the point **perpendicular to the given line**.



Nov 15-1:11 PM

Example 3: Classify the pair of numbered angles.



Nov 15-1:13 PM