

Transversal Parallel Lines & lines

Mrs. Mac's Class

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Goals Aligned to Common Core Standards

- You will know the precise definitions of parallel lines, skew lines, and transversals.
- You will name angle pairs formed by parallel lines and transversals.
- MP 6

What is the difference between Parallel and Skew Lines?

PARALLEL

- Lines that are in the same plane,
- and never intersect.



<http://archide.files.wordpress.com/2008/12/012.jpg>

SKEW

- Lines that are not in the same plane,
- and never intersect.



ajn23212 www.fotosearch.com

Equidistant

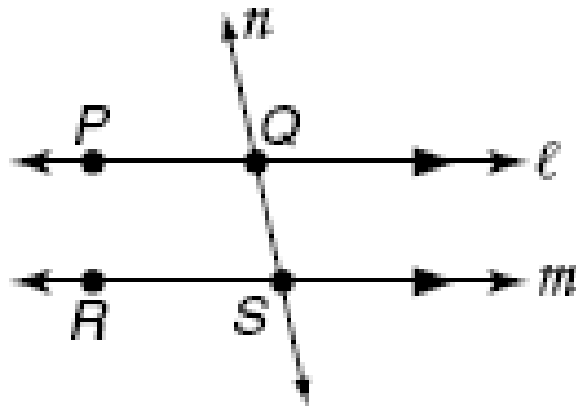
Symbols

PARALLEL

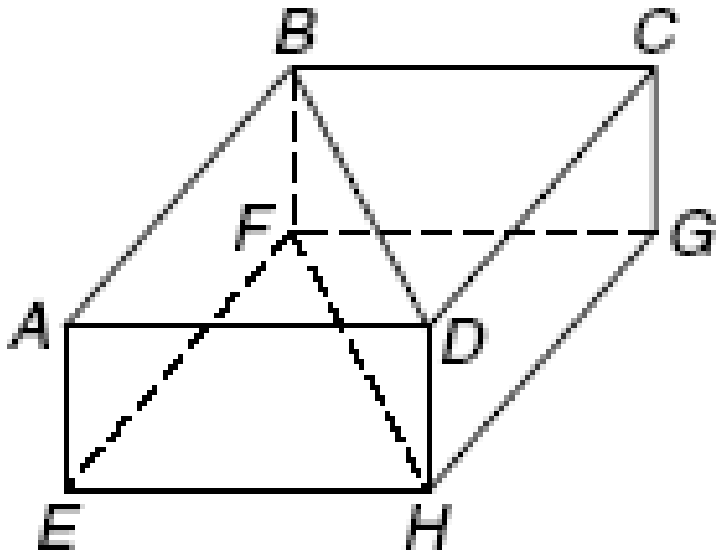
- Symbol: \parallel
- Example: $l \parallel m$

NOT PARALLEL

- Symbol: \nparallel
- Example: $m \nparallel n$



Examples



- 1.) Name all planes parallel to plane ABD.

Plane EFG

- 2.) Name all segments that are parallel to CG.

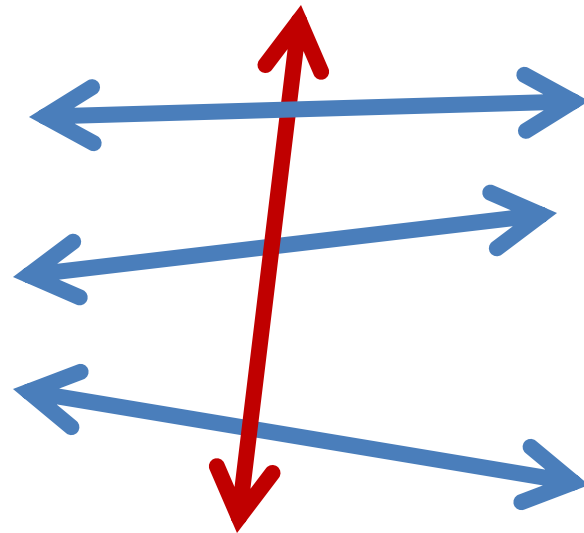
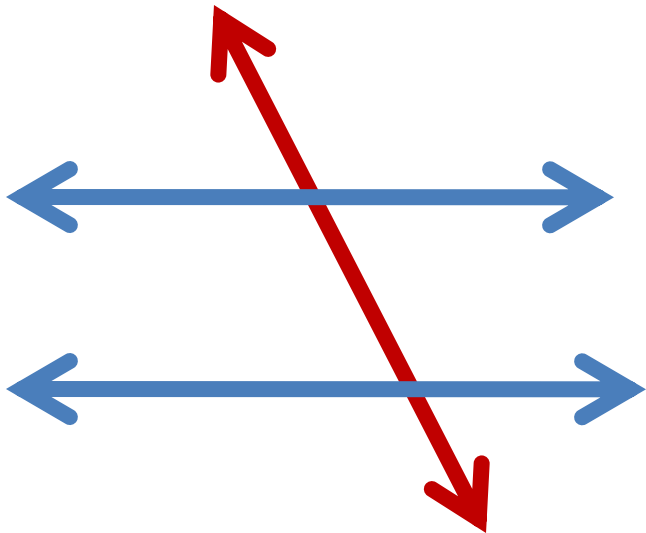
$\overline{AE}, \overline{DH}, \overline{BF},$

- 3.) Name all segments that are skew to EH.

$\overline{BD}, \overline{CG}, \overline{BA}, \overline{BF}, \overline{CD},$

What is a Transversal?

- A **transversal** is a line that intersects two or more lines at different points.

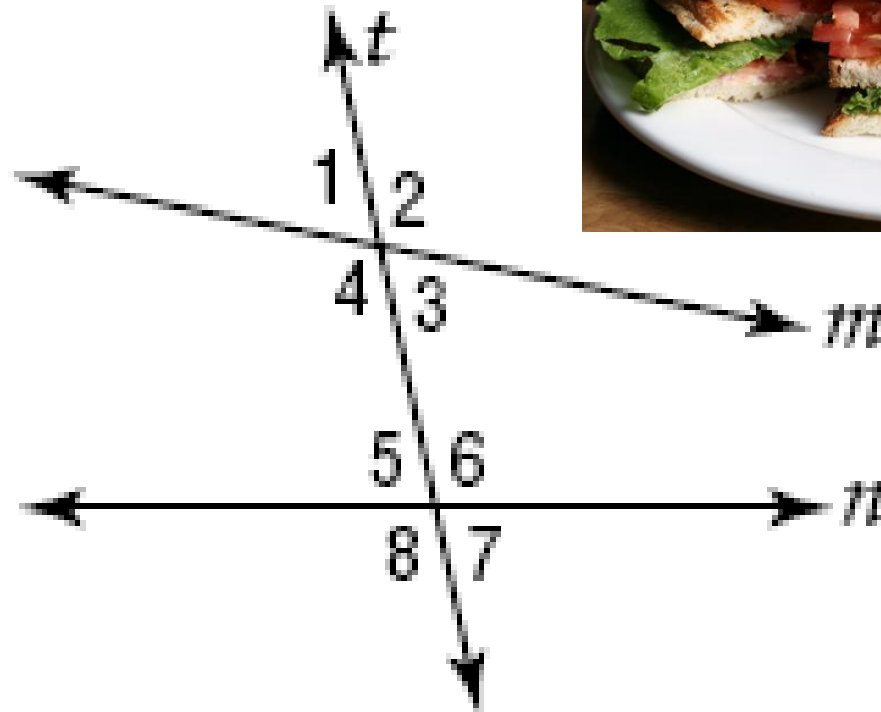


Special Angle Names

Imagine a sandwich.

Lines m and n are represented by the bread and the transversal line is the toothpick.

http://g-ecx.images-amazon.com/images/G/01/askville/291827_9042666_mywrite/blt.jpg



Name	#'s
Interior Angles	$\angle 3, \angle 4,$ $\angle 5, \angle 6$
Exterior Angles	$\angle 1, \angle 2,$ $\angle 7, \angle 8$
Alternate Interior Angles	$\angle 4$ & $\angle 6,$ $\angle 3$ & $\angle 5$
Alternate Exterior Angles	$\angle 1$ & $\angle 7$ $\angle 2$ & $\angle 8$
Consecutive Interior Angles	$\angle 4$ & $\angle 5$ $\angle 3$ & $\angle 6$
Corresponding Angles	$\angle 1$ & $\angle 5$ $\angle 2$ & $\angle 6$ $\angle 4$ & $\angle 8$ $\angle 3$ & $\angle 7$

Examples

Name the transversal that forms each pair of angles.
Then identify the special name for each angle pair.

1.) 4 and 10

g, AIA

2.) 2 and 12

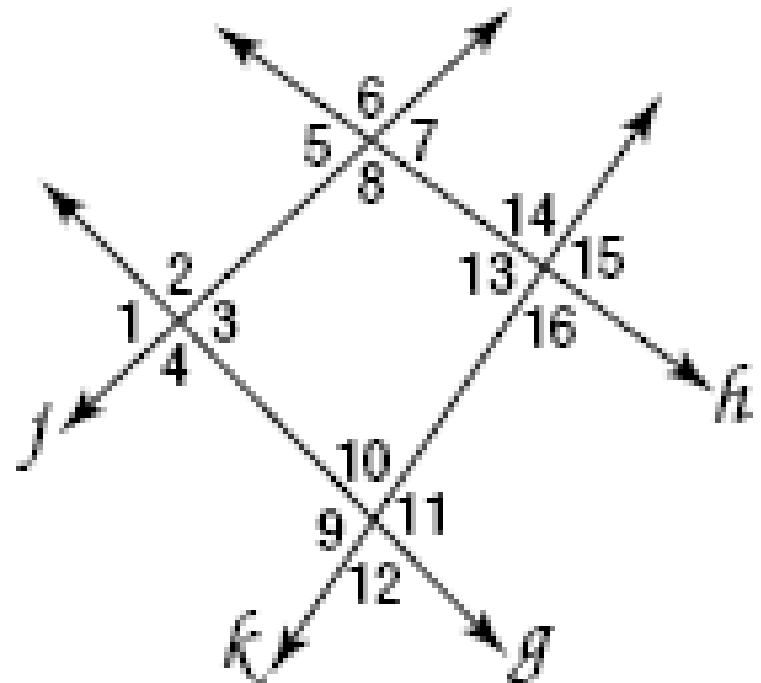
g, AEA

3.) 7 and 3

j, corr

4.) 13 and 10

k, CIA



Goals

- You can give the precise definitions of parallel lines, skew lines, and transversals.
- You can name angle pairs formed by parallel lines and transversals.

