Geometry

Notes Section 3.1

Identify Pairs of Lines and Angles

VOCABULARY

Parallel Lines: lines that never intersect & are coplanar

Skew Lines: lines that never intersect & noncoplanar

Parallel Planes: planes that never intersect

Transversal: a line that intersects 2 or more lines at 1 point each & _____

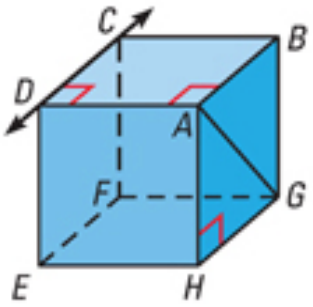
Corresponding Angles: angles on the same side on the transversal; 1 interior and 1 exterior angle; can not form a linear pair

Alternate Interior Angles: angles on opposite sides of the transversal; Both Interior angles

Alternate Exterior Angles: angles on opposite sides of the transversal; Both Exterior angles

Consecutive Interior Angles: angles on the same side of the transversal; Both interior angles

EXAMPLE 1 Think of each segment as part of a line. Which line(s) or plane(s) appear to fit the description?



a) Line(s) parallel to CD and containing point A

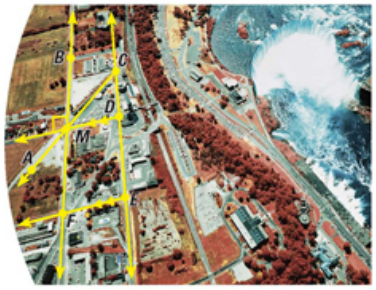
b) Line(s) skew to CD and containing point A

c) Line(s) perpendicular to CD and containing point A

d) Plane(s) parallel to plane EFG and containing point A

POSTULATE 13 If there is a line and a point not on the line, then there is exactly 1 line through the point parallel to the given line.

POSTULATE 14 If there is a line and a point not on the line, then there is exactly 1 one through the point perpendicular to the given line.



Niagara Falls, New York

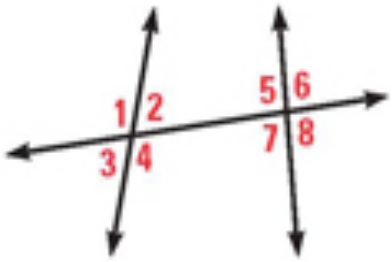
EXAMPLE 2 Name the following.

a) a pair of parallel lines _____

b) a pair of perpendicular lines _____

c) Is FE parallel to AC? Explain. _____

_____



EXAMPLE 3 Identify all pairs of angle types.

a) Corresponding angles _____

b) Alternate Interior angles_____

c) Alternate Exterior angles_____

d) Consecutive Interior angles_____