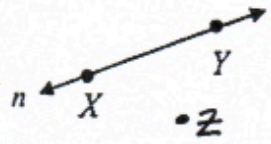
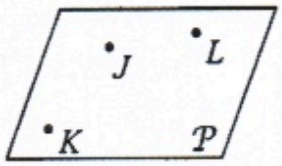
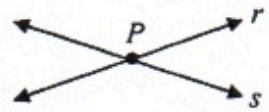
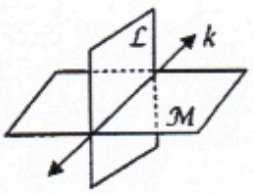
Name:	Date:
Topic: 1.2.1	Class:

Main Ideas/Questions	Notes
POINT • A	• A point is a location. • It has no size or shape. • Always use a CAPITAL LETTER to name a point. Example: point A
LINE  X, Y, Z are non-collinear	• A line is made up of points. • Any 2 points form a line. • A line has no thickness or width. • Name a line by any two points on the line, or a lowercase script letter. Example: $\overleftrightarrow{XY}$, line n, line XY • **COLLINEAR POINTS:** Points that lie on the same line. • **NON-COLLINEAR POINTS:** Points that do NOT lie on the same line. **(Must be at least three points!)**
PLANE  	• A plane is a flat surface made up of points. • Any 3 points make up a plane. • A plane extends indefinitely in all directions. • Name a plane by any three non-collinear points on the plane, or an uppercase script letter. Example: plane P, plane KJL • **COPLANAR POINTS:** Points that line on the same plane. • **NON-COPLANAR POINTS:** Points that do NOT lie on the same plane. **(Must be at least four points!)**
Intersecting LINES & PLANES	 Two lines intersect at a point!  Two planes intersect at a line!

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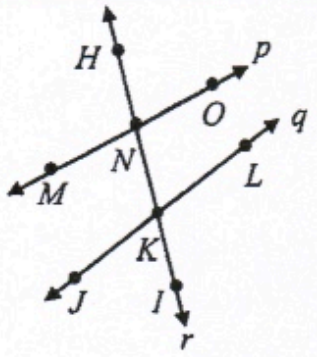
* Answers may vary *

Naming Points, Lines, and Planes: Practice!

1. Use the diagram to the right to name the following.



a) Four collinear points. H, N, K, I

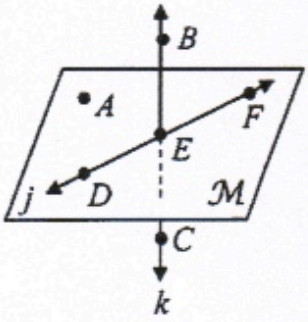
b) A line that contains point M. line p

c) A line that contains points H and K. line r

d) Another name for line q. $\overleftrightarrow{JL}$, $\overleftrightarrow{JK}$, $\overleftrightarrow{KL}$

e) The intersection of lines p and r. N

2. Use the diagram to the right to name the following.



a) A line containing point F. line j

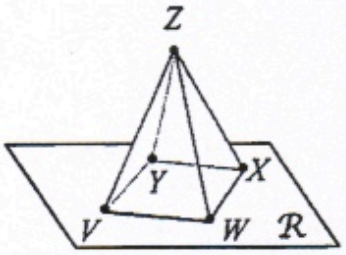
b) Another name for line k. $\overleftrightarrow{BE}$, $\overleftrightarrow{BC}$, $\overleftrightarrow{EC}$

c) A plane containing point A. plane M

d) An example of three non-collinear points. A, B, D

e) The intersection of plane M and line k. E

3. Use the diagram to the right to name the following.



a) Three coplanar points. V, Y, X

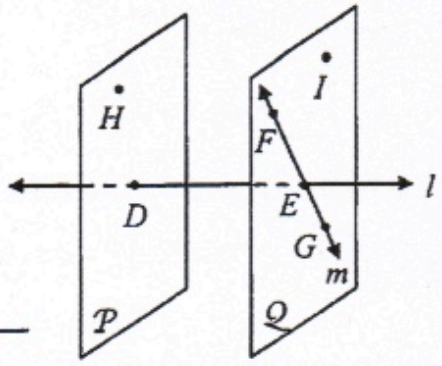
b) A plane containing point X. plane R

c) The intersection of plane R and plane ZVY. $\overline{VY}$

d) How many planes appear in the figure? 5

e) How many planes contain point W? 3

4. Use the diagram to the right to name the following.



a) The intersection of lines l and m. E

b) Another name for plane Q. plane IFG

c) Are points D and E collinear or coplanar? collinear

d) How many times do planes $\mathcal{P}$ and $\mathcal{Q}$ intersect? 0

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