Handout 1.2: Points, Lines, and Planes

Name: Key _____ **Date:** _____ **Per:** _____

Answer all of the following.

1) What are two other ways to name $\overleftrightarrow{EF}$?

n and $\overleftrightarrow{BE}$ (answers vary)

2) What are two ways to name the shaded plane?

GEB and BFG

3) Name three collinear points.

E, B, and F

4) Name three points that are not collinear.

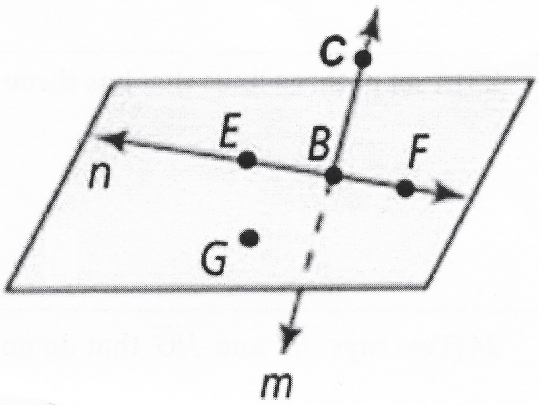
G, C, and F

5) Name four coplanar points.

B, E, F, and G

6) Name four different points that are coplanar.

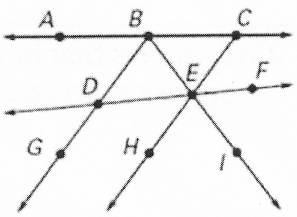
B, E, F, and G



Name a point that is collinear with the given points.

7) B, E, and I

8) F, D, and E



Name a point that is coplanar with the given points.

9) *M, N, R,* and T

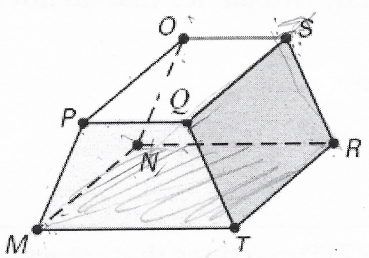
10) *M, N, O,* and P

11) *M, T, Q,* and P

12) *Q, S, M,* and N

13) *O, S, M,* and T

14) *O, T, R,* and P



15) Plane *POS* and plane *SRN* intersect at $\overleftrightarrow{OS}$.

16) Plane *PMT* and plane *PMN* intersect at $\overleftrightarrow{PM}$.

17) Plane *MRT* and plane *NRS* intersect at $\overleftrightarrow{NR}$. → MRT includes N

18) $\overleftrightarrow{MN}$ and $\overleftrightarrow{RN}$ intersect at N.

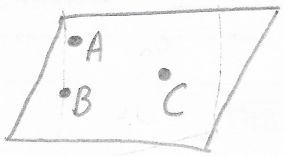
19) Name two planes that intersect at $\overleftrightarrow{QS}$. OSQ and RSQ

20) Name two lines that intersect at *Q*. $\overleftrightarrow{PQ}$ and $\overleftrightarrow{SQ}$

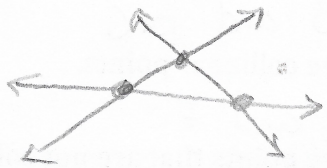
21) True or false? Two lines that intersect are always coplanar. False

Sketch the figure described.

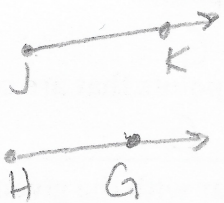
22) Three points that are coplanar but not collinear



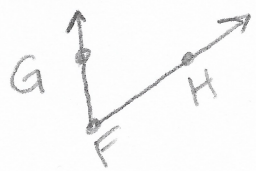
23) A set of three lines that has three points of intersection



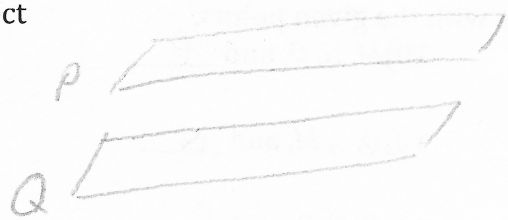
24) Two rays $\overrightarrow{JK}$ and $\overrightarrow{HG}$ that do not intersect



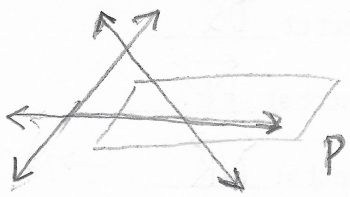
25) Two rays that intersect at their initial points but are not opposite rays (do not go in the exact opposite direction)



26) Two planes that do not intersect



27) Three lines that intersect in a point but do not all lie in the same plane



28) Draw four points *J, K, L,* and *M,* no three of which are collinear. Then sketch $\overrightarrow{JK}$, $\overrightarrow{KL}$, $\overleftrightarrow{LM}$, and $\overrightarrow{MJ}$.