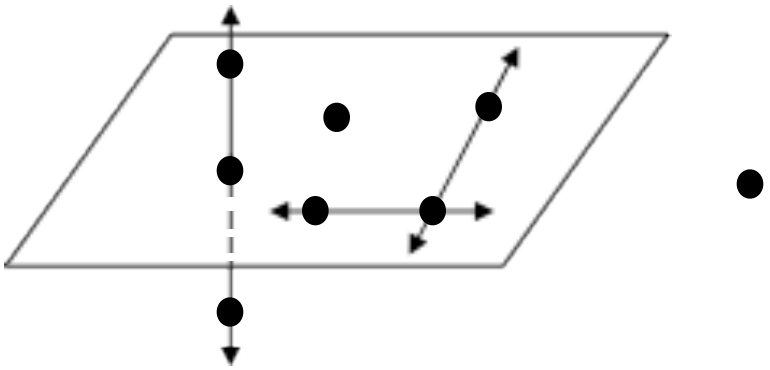
Points, Lines, and Planes Homework **Name_____**

Use the figure below to answer questions 1- 6.



1. Name the plane using 3 letters: _____

2. $\overleftrightarrow{AC}$ intersects the plane at what point? _____

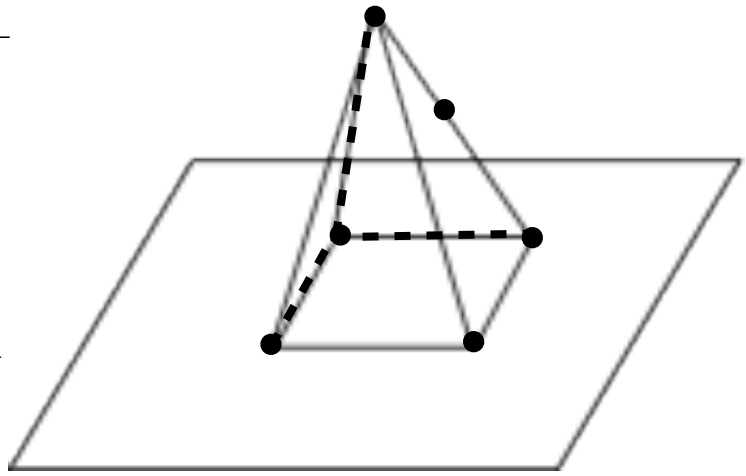
3. $\overleftrightarrow{HG}$ and $\overleftrightarrow{GE}$ intersect at what point? _____

4. Name 3 collinear points: _____

5. Name a point NOT on the plane: _____

6. Are points F, D, E and B coplanar? _____

Use the figure at the right to answer questions 7 - 13.



7. How many planes are there in the figure? _____

8. How many planes contain H? _____

9. Name three collinear points: _____

10. Name two points not on the Plane XBN: _____

11. Name four points that are coplanar: _____

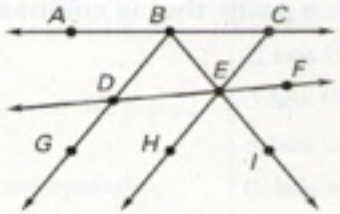
12. Name a line that does NOT contain J: _____

13. Name three non-collinear points: _____

Points, Lines, and Planes Homework **Name_____**

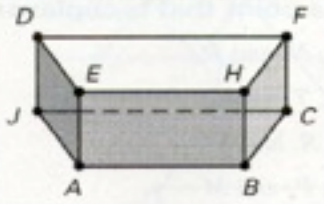
Name a point that is collinear with the given points.

9. B and E
11. D and G
13. H and E
15. B and I



Name a point that is coplanar with the given points.

17. J, A, and E
19. D, E, and A
21. A, B, and H
23. F, H, and B



For the following problem use postulates 5 – 11

5 – Through any two points there exists exactly one line.

6 – A line contains at least two points.

7 – If two lines intersect, then their intersection is exactly one point.

8 – Through any three noncollinear points there exists exactly one plane.

9 – A plane contains at least three noncollinear points.

10 – If two points lie in a plane, then the line containing them lies in the plane.

11 – If two planes intersect, then their intersection is a line.

Use the diagram to state the postulate(s) that verifies the truth of the statement.

19. The points X, Y, and Z lie in a plane (labeled B).
20. The points X and Y lie on a line (labeled m).
21. The planes A and B intersect in a line (labeled l).
22. The points X and Y lie in a plane B. Therefore, line m lies in plane B.