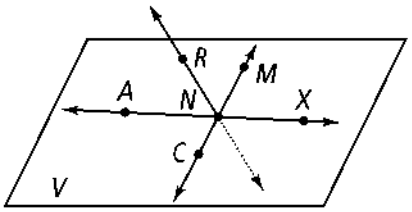
Name _____ Class _____ Date_____

1-2 Practice

GCP

Points, Lines, and Planes

Use the figure below for Exercises 1–8. Note that $\overleftrightarrow{RN}$ pierces the plane at *N*. It is not coplanar with *V*.



1. Name two segments shown in the figure.

2. What is the intersection of $\overleftrightarrow{CM}$ and $\overleftrightarrow{RN}$?

3. Name three collinear points.

4. What are two other ways to name plane *V*?

5. Are points *R*, *N*, *M*, and *X* coplanar?

6. Name two rays shown in the figure.

7. Name the pair of opposite rays with endpoint *N*.

8. How many lines are shown in the drawing?

For Exercises 9–14, determine whether each statement is *always*, *sometimes*, or *never* true.

9. $\overrightarrow{GH}$ and $\overrightarrow{HG}$ are the same ray.

10. $\overrightarrow{JI}$ and $\overrightarrow{JL}$ are opposite rays.

11. A plane contains only three points.

12. Three noncollinear points are contained in only one plane.

13. If $\overleftrightarrow{EG}$ lies in plane *X*, point *G* lies in plane *X*.

14. If three points are coplanar, they are collinear.

15. Reasoning Is it possible for one ray to be shorter in length than another? Explain.

16. Open-Ended Draw a figure of two planes that intersect in $\overleftrightarrow{ST}$.

Name _____ Class _____ Date_____

1-2 Practice (continued)

GCP

Points, Lines, and Planes

17. Draw a figure to fit each description.

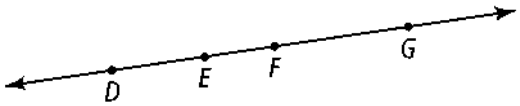
a. Through any two points there is exactly one line.

b. Two distinct lines can intersect in only one point.

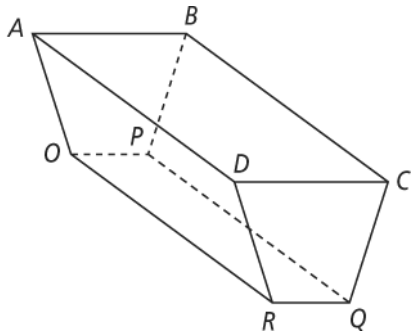
18. Reasoning Point F lies on $\overrightarrow{EG}$ and point M lies on $\overrightarrow{EN}$. If F, E, and M are collinear, what must be true of these rays?

19. Writing What other terms or phrases mean the same as *postulate?*

20. How many segments can be named from the figure at the right?



Use the figure at the right for Exercises 21–29.
Name the intersection of each pair of planes or lines.



21. planes *ABP* and *BCD*

22. $\overleftrightarrow{RQ}$ and $\overleftrightarrow{RO}$

23. planes *ADR* and *DCQ*

24. planes *BCD* and *BCQ*

25. $\overleftrightarrow{OP}$ and $\overleftrightarrow{QP}$

Name two planes that intersect in the given line.

26. $\overleftrightarrow{RO}$ **27.** $\overleftrightarrow{CQ}$ **28.** $\overleftrightarrow{DA}$ **29.** $\overleftrightarrow{BP}$

Coordinate Geometry Graph the points and state whether they are collinear.

30. (0, 0), (4, 2), (6, 3)

31. (0, 0), (6, 0), (9, 0)

32. (–1, 1), (2, –2), (4, –3)

33. (1, 2), (2, 3), (4, 5)

34. (–2, 0), (0, 4), (2, 0)

35. (–4, –1), (–1, –2), (2, –3)