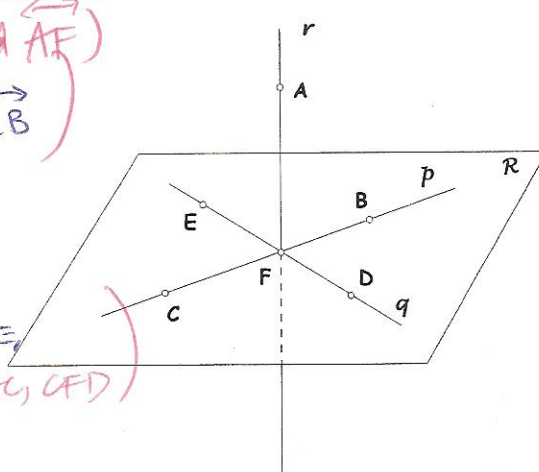


Decide whether each of these "things" is best modeled by a *point*, *line* or *plane*.

- |                                       |                      |                           |              |
|---------------------------------------|----------------------|---------------------------|--------------|
| 1. a star in the sky                  | <u>point</u>         | 2. an ice skating rink    | <u>plane</u> |
| 3. a telephone wire between two poles | <u>line</u>          | 4. a taut piece of thread | <u>line</u>  |
| 5. a knot in a piece of string        | <u>point</u>         | 6. a piece of cloth       | <u>plane</u> |
| 7. the corner of a room               | <u>line or point</u> | 8. your desktop           | <u>plane</u> |
| 9. the lines on notebook paper        | <u>lines</u>         | 10. A fold in paper       | <u>line</u>  |

Use the figure at the right to answer each of the following questions.

- |   |  |
|---|--|
| 11. Name a line containing point A.           | <u>line r (or <del>AF</del> AF)</u>  |
| 12. Name a line passing through B.            | <u>line p, <math>\overleftrightarrow{CF}</math>, <math>\overleftrightarrow{FB}</math>, <math>\overleftrightarrow{CB}</math></u>  |
| 13. Name two points collinear with point D.   | <u>F + E</u>   |
| 14. Name two points coplanar with point B.    | <u>E, C or D</u>   |
| 15. Name a plane containing pts. B, C, and E. | <u>Plane R (<math>\overleftrightarrow{BCE}</math>, <math>\overleftrightarrow{BFE}</math>, <math>\overleftrightarrow{BFD}</math>, <math>\overleftrightarrow{EFC}</math>, <math>\overleftrightarrow{CFD}</math>)</u> |
| 16. Name a plane containing lines p and q     | <u>"</u>   |



Draw and label a figure for each relationship.

<p>17. Point S lies on line PR.</p>	<p>18. Points A and B are collinear but points F, A, B, and C are noncollinear.</p>
<p>19. Line m contains A and B, but doesn't contain C.</p>	<p>20. Lines a, b, and c are coplanar, but do not intersect.</p>

Write true or false.

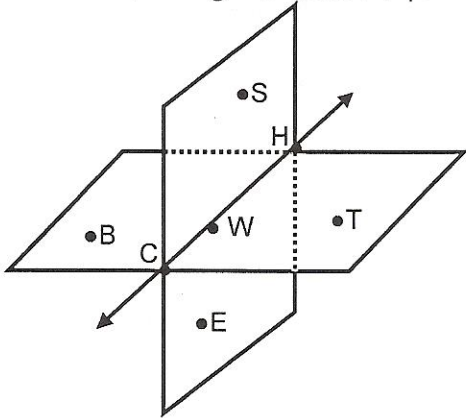
- |   |   |
|---|---|
| 41. $\overleftrightarrow{XY}$ is the same as $\overleftrightarrow{YX}$ . <u>T</u>                                   | 42. $\overleftrightarrow{XY}$ is the same as $\overleftrightarrow{YX}$ . <u>F</u>   |
| 43. If $\overleftrightarrow{AB}$ and $\overleftrightarrow{AC}$ are opposite rays, then they are collinear. <u>T</u> | 44. If two rays have the same endpoint, then they form a line. <u>F</u>   |
| 45. If the union of two rays is a line, then the rays are opposite rays. <u>F</u>                                   | 46. If $\overleftrightarrow{PQ}$ and $\overleftrightarrow{PR}$ are the same rays, then Q and R are the same point. <u>F</u> |

Refer to the diagram at the right.

44. Name  $\overline{EF}$  in another way.  $\overline{EG}$
45. How many different segments can be named? 6
46. Name a pair of opposite rays with  $E$  as an endpoint.  $\overrightarrow{ED}$  and  $\overrightarrow{EF}$  (or  $\overrightarrow{EG}$ )
47. Name in two different ways the ray opposite  $\overrightarrow{FG}$ .  $\overrightarrow{FE}$  or  $\overrightarrow{FD}$
48. Name  $\overline{GE}$  in two other ways.  $\overline{GF}$ ,  $\overline{GD}$
49. Are  $\overline{EG}$  and  $\overline{GE}$  the same segment? yes



Use the diagram below for problems 23-25.



Determine if the 4<sup>th</sup> point is coplanar with the first 3 points. Answer coplanar or noncoplanar.

coplanar 23. C, B, W, T

non coplanar 24. C, H, S, B

$\overleftrightarrow{CH}$  (or  $\overleftrightarrow{CW}$  or  $\overleftrightarrow{WH}$ ) 25. Name the intersection of planes CBW and CHS.

yes 25b. Are points E, W, T coplanar? Why?

any three points are always coplanar

Use the diagram on the right for problems 26 - 33.

J 26. Name another point in plane ICD.

K 27. Name another point in plane ABJ.

FLGA 28. Name a plane parallel to plane DCI.

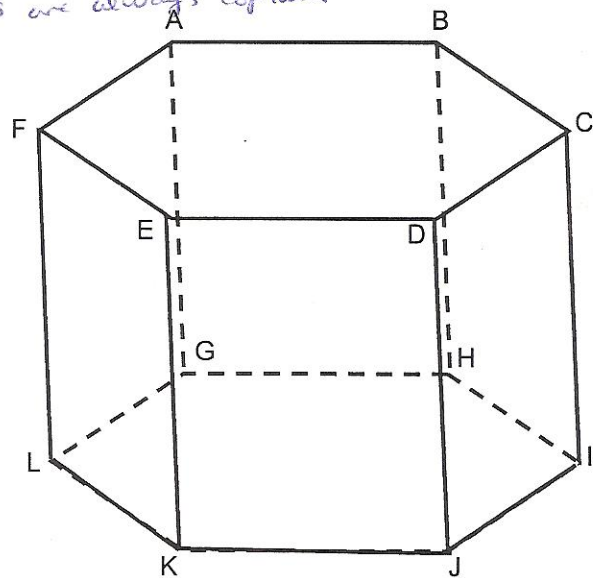
$\overleftrightarrow{ED}$ ,  $\overleftrightarrow{RJ}$ ,  $\overleftrightarrow{GH}$  29. Name two lines parallel to line AB.

$\overleftrightarrow{DJ}$  30. If planes EJD and DCI intersect, name their intersection.

$\overleftrightarrow{AF}$  &  $\overleftrightarrow{FE}$  or  $\overleftrightarrow{BC}$  &  $\overleftrightarrow{CD}$  31. Name 2 intersecting lines in plane ABC that are both skew to line KJ.

parallel 32. Lines FE and HI can best be described as \_\_\_\_\_ lines.

parallel 33. Lines DC and LG can best be described as \_\_\_\_\_ lines.



"fruit  
ninja  
plane"

Answer "always," "sometimes," or "never" for problems 35 -40.

Sometimes 34. Two lines that do not intersect are \_\_\_\_\_ skew.

never 35. Skew lines are \_\_\_\_\_ parallel.

Sometimes 36. Two lines parallel to a plane are \_\_\_\_\_ intersecting.

always 37. Parallel lines are \_\_\_\_\_ coplanar.

Sometimes 38. Rays JK and JL are \_\_\_\_\_ the same ray.

Sometimes 39. Two rays that share an endpoint are \_\_\_\_\_ opposite rays.

Sometimes 40. In space, two lines perpendicular to the same line are \_\_\_\_\_ perpendicular.