

GUIDED PRACTICE

Vocabulary Check ✓

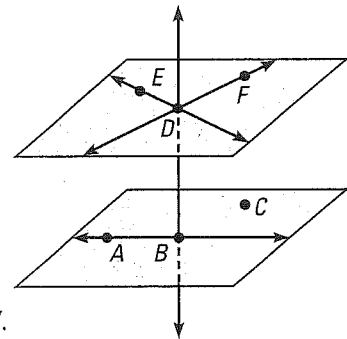
Concept Check ✓

- Describe what each of these symbols means: \overline{PQ} , \overrightarrow{PQ} , \overleftrightarrow{PQ} , \overleftarrow{PQ} .
- Sketch a line that contains point R between points S and T . Which of the following are true?
 - \overrightarrow{SR} is the same as \overrightarrow{ST} .
 - \overrightarrow{SR} is the same as \overleftarrow{RT} .
 - \overrightarrow{RS} is the same as \overrightarrow{TS} .
 - \overrightarrow{RS} and \overrightarrow{RT} are opposite rays.
 - \overrightarrow{ST} is the same as \overrightarrow{TS} .

Skill Check ✓

Decide whether the statement is true or false.

- Points A , B , and C are collinear.
- Points A , B , and C are coplanar.
- Point F lies on \overleftrightarrow{DE} .
- \overleftrightarrow{DE} lies on plane DEF .
- \overleftrightarrow{BD} and \overleftrightarrow{DE} intersect.
- \overleftrightarrow{BD} is the intersection of plane ABC and plane DEF .



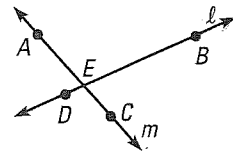
PRACTICE AND APPLICATIONS

STUDENT HELP

Extra Practice to help you master skills is on p. 803.

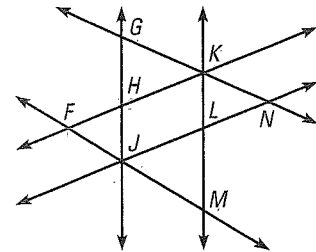
EVALUATING STATEMENTS Decide whether the statement is true or false.

- Point A lies on line ℓ .
- Point B lies on line ℓ .
- Point C lies on line m .
- Point D lies on line m .
- A , B , and C are collinear.
- A , B , and C are coplanar.
- D , E , and B are collinear.
- D , E , and B are coplanar.



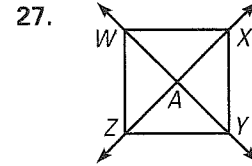
NAMING COLLINEAR POINTS Name a point that is collinear with the given points.

- F and H
- K and L
- J and N
- H and G
- G and K
- M and J
- K and H
- J and F



NAMING NONCOLLINEAR POINTS Name three points in the diagram that are not collinear.

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STUDENT HELP

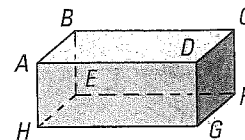
HOMEWORK HELP

- Example 1: Exs. 9–43
 Example 2: Exs. 44–49
 Example 3: Exs. 50, 51
 Example 4: Exs. 52–67

NAMING COPLANAR POINTS Name a point that is coplanar with the given points.

28. $A, B,$ and C
 30. $G, A,$ and D
 32. $A, B,$ and H
 34. $A, B,$ and F

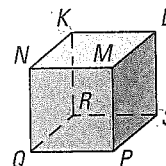
29. $D, C,$ and F
 31. $E, F,$ and G
 33. $B, C,$ and F
 35. $B, C,$ and G



NAMING NONCOPLANAR POINTS Name all the points that are not coplanar with the given points.

36. $N, K,$ and L
 38. $P, Q,$ and N
 40. $P, Q,$ and R
 42. $P, S,$ and K

37. $S, P,$ and M
 39. $R, S,$ and L
 41. $R, K,$ and N
 43. $Q, K,$ and L



COMPLETING DEFINITIONS Complete the sentence.

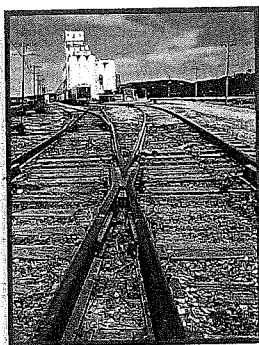
44. \overline{AB} consists of the endpoints A and B and all the points on the line \overleftrightarrow{AB} that lie ____?
 45. \overrightarrow{CD} consists of the initial point C and all points on the line \overleftrightarrow{CD} that lie ____?
 46. Two rays or segments are collinear if they ____?
 47. \overrightarrow{CA} and \overrightarrow{CB} are opposite rays if ____?

SKETCHING FIGURES Sketch the lines, segments, and rays.

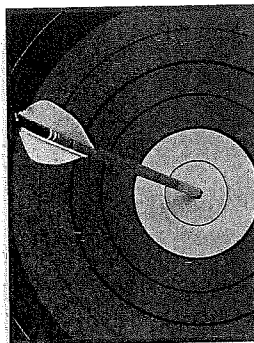
48. Draw four points $J, K, L,$ and $M,$ no three of which are collinear. Then sketch $\overline{JK}, \overline{KL}, \overline{LM},$ and $\overline{MJ}.$
 49. Draw five points $P, Q, R, S,$ and $T,$ no three of which are collinear. Then sketch $\overrightarrow{PQ}, \overleftarrow{RS}, \overline{QR}, \overline{ST},$ and $\overline{TP}.$
 50. Draw two points, X and $Y.$ Then sketch $\overleftrightarrow{XY}.$ Add a point W between X and Y so that \overrightarrow{WX} and \overrightarrow{WY} are opposite rays.
 51. Draw two points, A and $B.$ Then sketch $\overleftrightarrow{AB}.$ Add a point C on the ray so that B is between A and $C.$

EVERYDAY INTERSECTIONS What kind of geometric intersection does the photograph suggest?

52.



53.



54.

