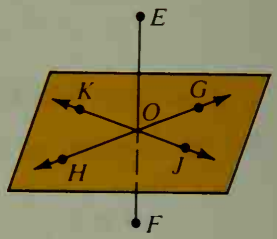
Examinations

Chapter 1

Indicate the best answer by writing the appropriate letter.

1. Which of the following sets of points are *not* coplanar?
   a. E, H, O, G **b.** K, O, G, E
   c. E, O, F, J **d.** H, K, O, J

2. Which of the following sets of points are contained in *more* than one plane?
   a. G, O, J **b.** E, O, G
   c. H, E, G **d.** G, O, H



Exs. 1–4

3. How many planes contain point E and $\overleftrightarrow{JK}$?
   a. 0 **b.** exactly 1
   c. unlimited **d.** unknown

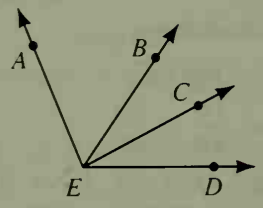
4. If $\overleftrightarrow{GH}$ bisects $\overline{EF}$, which statement is *not necessarily* true?
   a. O is the midpoint of $\overline{GH}$. **b.** $\overline{EO} \cong \overline{OF}$
   c. E, F, G, H, and O are coplanar. **d.** $GO + OH = GH$

5. Points A, B, C are collinear, but they do not necessarily lie on a line in the order named. If $AB = 5$ and $BC = 3$, what is the length of $\overline{AC}$?
   a. either 2 or 8 **b.** either 2 or 4 **c.** 2 **d.** 8

6. On a number line, point R has coordinate -5 and point S has coordinate 3. Point X lies on $\overrightarrow{SR}$ and $SX = 5$. Find the coordinate of X.
   a. -10 **b.** -2 **c.** 8 **d.** 0

7. Which angle appears to be obtuse?
   a. $\angle AEB$ **b.** $\angle DEB$
   c. $\angle CEA$ **d.** $\angle AED$

8. If $\overrightarrow{EC}$ bisects $\angle DEB$, $\overrightarrow{EB}$ bisects $\angle DEA$, and $m\angle BEC = 28$, find the measure of $\angle CEA$.
   a. 28 **b.** 56
   c. 84 **d.** 112



Exs. 7–9

9. Which two angles are adjacent angles?
   a. $\angle DEB$ and $\angle BEA$ **b.** $\angle DEB$ and $\angle CEA$
   c. $\angle DEC$ and $\angle BEA$ **d.** $\angle DEA$ and $\angle DEC$

10. M is the midpoint of $\overline{YZ}$. If $YM = r + 3$ and $YZ = 3r - 1$, find MZ.
    a. 7 **b.** 10 **c.** 20 **d.** 4

11. Which of the following is *not always* true when lines j and k intersect?
    a. Exactly one plane contains line j.
    b. The lines intersect in exactly one point.
    c. All points on j and k are coplanar points.
    d. Given any point P on j and any point Q on k, P and Q are collinear points.