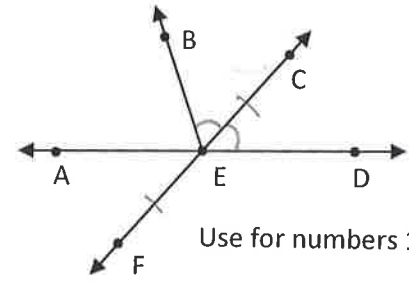


Use the given information to answer the questions below.

1. Name two congruent segments.
2. Name a ray opposite \overrightarrow{ED} .
3. Name a ray opposite \overrightarrow{EF} .
4. $AE + ED =$ _____
5. $m\angle AEF + m\angle AEB = m\angle$ _____
6. Name an angle bisector
7. $m\angle BEC = 55^\circ$, then $m\angle CED =$ _____
8. $m\angle AEC = 115^\circ$, then $m\angle AEF =$ _____
9. If $FC = 24$, then $EC =$ _____
10. Name a straight angle.

$\overline{FE} \cong \overline{EC}$
 \overrightarrow{EB}
 \overrightarrow{EC}
 AD
 $\angle FEB$
 \overrightarrow{EC}
 55
 65
 12
 $\angle AED$ $\angle FEC$

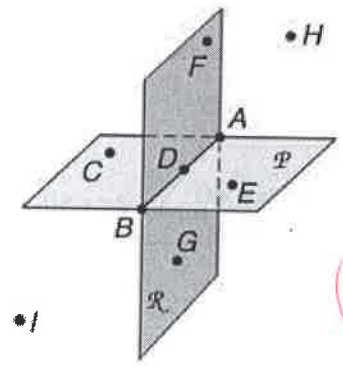
E is the midpoint of \overline{FC} , $\triangle BEC \cong \triangle CED$



Use for numbers 1-10

11. Name a plane that contains point F
12. Points B, D, A are collinear. (T/F)
13. Points F, E, C are coplanar. (T/F)
14. Name the plane that contains point C
15. Name the intersection on Plane R and Plane P.

PLANE
 R
 T
 T
 PLANE
 P
 \overrightarrow{AB}

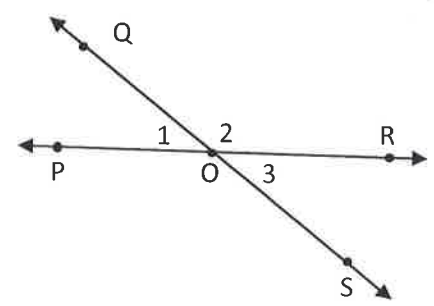


16. If $QO = 2x - 3$, $OS = 3x + 8$, and $QS = 40$, then $x =$ 7
 $2x - 3 + 3x + 8 = 40$

$5x + 5 = 40$
 $5x = 35$ $x = 7$

17. If $m\angle QOP = 5x + 20$ and $m\angle POS = 3x$, then $x =$ 20

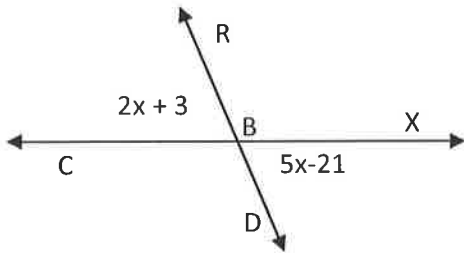
$5x + 20 + 3x = 180$
 $8x = 160$
 $x = 20$



True or False

18. The length of a segment can sometimes be negative. F
19. In the figure above, $\angle 1$ and $\angle 2$ are considered adjacent angles. T
20. A plane can be formed by three points that are not on one line. T
21. Theorems are statements that must be proven. T
22. \overrightarrow{PO} and \overrightarrow{OP} are the same ray. F
23. \overrightarrow{RS} and \overrightarrow{SR} are the same line. T
24. If two lines intersect, then they intersect in at least one point. F
25. If two points are in a plane, then the line that contains those points is also in that plane. T

26. Solve for x and give the each angles measure.



$$2x+3 = 5x-21$$

$$24 = 3x$$

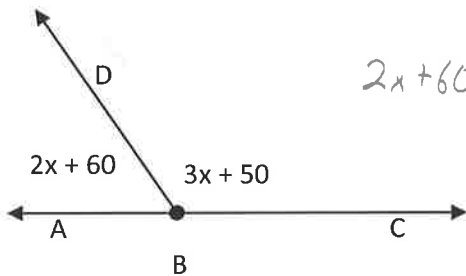
$$x = 8$$

$$x = \underline{8}$$

$$m \angle CBR = \underline{19}$$

$$m \angle DBX = \underline{19}$$

27. The following angles are supplementary. Find the value of x and each angle measure.



$$2x+60 + 3x+50 = 180$$

$$5x+110 = 180$$

$$5x = 70$$

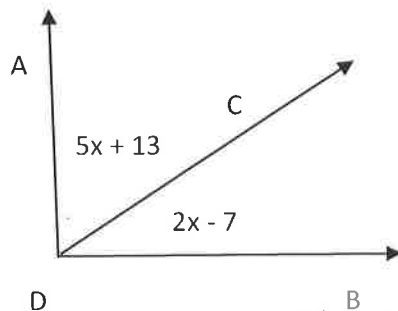
$$x = 14$$

$$x = \underline{14}$$

$$m \angle ABD = \underline{88}$$

$$m \angle DBC = \underline{92}$$

28. Angles $\angle ADC$ and $\angle BDC$ are complementary. Find the value of x and each angle measure.



$$5x+13 + 2x-7 = 90$$

$$7x+6 = 90$$

$$7x = 84$$

$$x = 12$$

$$x = \underline{12}$$

$$m \angle ADC = \underline{73}$$

$$m \angle BDC = \underline{17}$$

Always, Sometimes, OR Never.

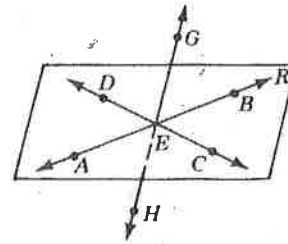
1. Two points ALWAYS lie in exactly one line.
2. Three points SOMETIMES lie in exactly one line.
3. Three points SOMETIMES lie in exactly one plane.
4. Three collinear points NEVER lie in exactly one plane.
5. Two Planes SOMETIMES intersect.
6. Two intersecting planes NEVER intersect in exactly one point.
7. Two intersecting planes ALWAYS intersect in a line.
8. Two lines SOMETIMES intersect in exactly one point.
9. Two intersect lines ALWAYS intersect in exactly one point.
10. Two intersecting lines ALWAYS lie in exactly one plane.
11. A line and a point not on that line NEVER lie in more than one plane.
12. A line NEVER contains exactly one point.
13. When A and B are in a plane, \overleftrightarrow{AB} is ALWAYS in that plane.

Points, Lines, Planes, and Angles

For use after Chapter 1

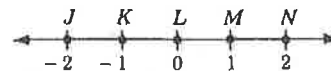
Complete.

- \vec{GH} intersects plane \bar{R} at point E.
- D, E, and C are collinear.
- $m\angle AEC + m\angle CEB =$ 180.
- If E is the midpoint of \overline{AB} , $AE = 21$, and $EB = 2x - 3$, then the value of x is 12.
 $21 = 2x - 3$
 $24 = 2x$ $x = 12$



Exs. 1-4

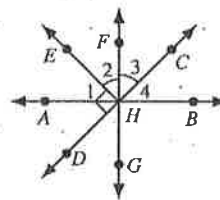
- What is the coordinate of K? -1
- What is the point with coordinate -2? J
- What is the distance JM? 3
- Which ray is opposite to \vec{LM} ? \vec{LK} \vec{LN}
- State another name for $\angle 1$. $\angle AHE$
- $m\angle AHE + m\angle EHC =$ $\angle AHC$
- State whether $\angle CHG$ appears to be acute, right, obtuse, or straight. OBTUSE



Exs. 5-8

Write the name of the definition or postulate that justifies the statement about the diagram.

- $m\angle 1 + m\angle 2 = m\angle AHF$ \angle ADD. POST.
- If H is the midpoint of \overline{CD} , then $DH = CH$. DEF OF MIDPOINT
- If \vec{HC} bisects $\angle BHF$, then $\angle 3 \cong \angle 4$. DEF OF \angle BISECTOR
- $CH + HD = CD$ SEG. ADD. POST



Exs. 9-19

Name each of the following.

- The sides of $\angle EHB$. \vec{HE} \vec{HB}
- A right angle $\angle EHO$ $\angle EHC$
- An angle bisector \vec{HF}
- Two congruent adjacent angles $\angle EHF$, $\angle FHC$
 $\angle DHE$ $\angle EHC$

Classify each statement as true or false.

- Two planes intersect in exactly one point. F
- Two intersecting lines are always coplanar. T
- Three collinear points lie in exactly one plane. F
- There is exactly one line through two points. T