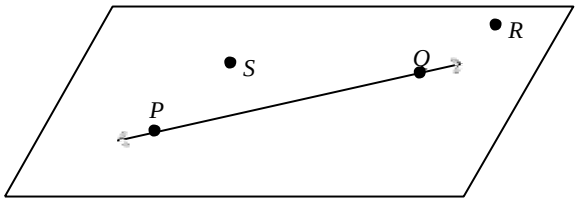
Geometry - Study Guide - Sections 1.2; 1.3 & 1.4

Vocabulary:
Please make sure you are able to define the following words

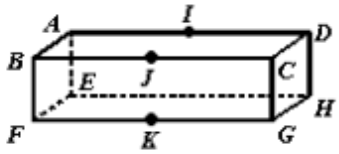
Point
Line
Plane
Collinear
Coplaner
Segment
Ray
Opposite Rays
Linear Pair
Angle
Acute Angle
Obtuse Angle
Right Angle
Congruent
Vertex
Midpoint
Segment bisector
Postulate
Intersection

Applying your knowledge:
Please be prepared to show us you know the sections by applying your knowledge in solving the following problems.

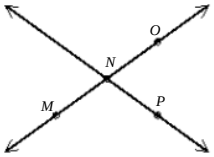
1. Name the line and plane shown in the diagram.



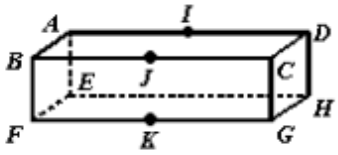
2. Are points *C*, *G*, and *H* collinear or noncollinear?



3. Are *O*, *N*, and *P* collinear? If so, name the line on which they lie.

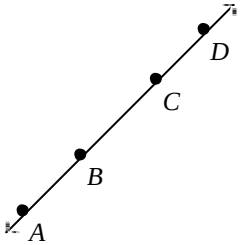


4. Name the plane represented by the front of the box.

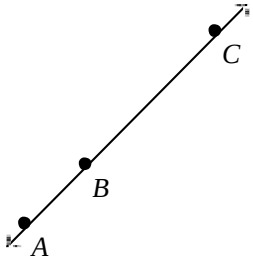


5. Name the ray in the figure.

6. What is the name of the ray that is opposite $\overrightarrow{BA}$?

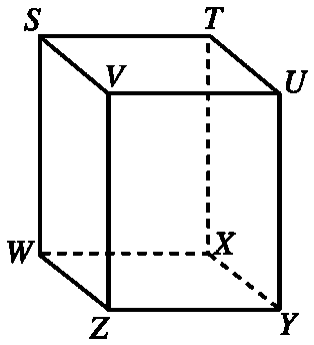


7. What are the names of the segments in the figure?



8. Name the intersection of plane *BPQ* and plane *CPQ*.

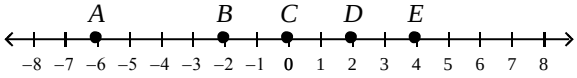
9. What is the intersection of plane *TUYX* and plane *VUYZ*?



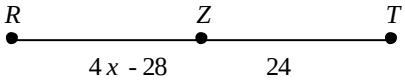
10. If $EF = 6$ and $EG = 21$, find the value of *FG*. The drawing is not to scale.

11. If $EF = 5x + 15$, $FG = 53$, and $EG = 143$, find the value of x. The drawing is not to scale.

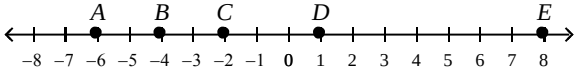
12. What segment is congruent to $\overline{AC}$?



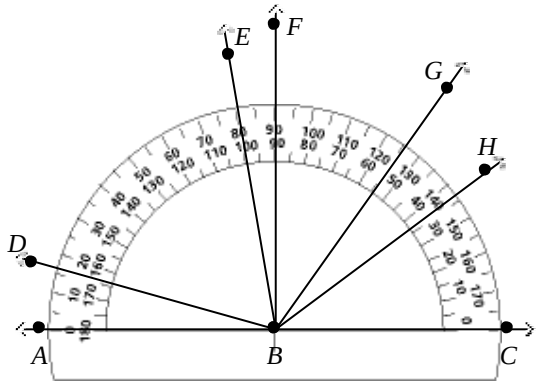
13. If *Z* is the midpoint of $\overline{RT}$, what are x, *RZ*, and *RT*?



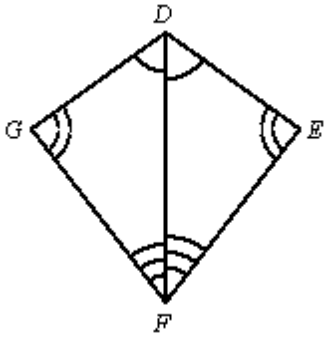
14. Which point is the midpoint of $\overline{AE}$?



15. What are the measures of $\angle EBG$ and $\angle EBC$? Classify each angle as *acute*, *right*, *obtuse*, or *straight*.

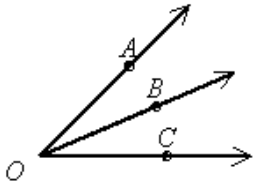


16. Complete the statement.
The drawing is not to scale.



If $m\angle GDF = 54°$, then $m\angle EDF =$ ___?___.

17. If $m\angle AOC = 85°$, $m\angle BOC = 2x + 10$, and $m\angle AOB = 4x - 15$, find the degree measure of $\angle BOC$ and $\angle AOB$. The diagram is not to scale.



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Answer Section

SHORT ANSWER

1. $\overleftrightarrow{PQ}$ and plane *PQS*
2. noncollinear
3. No, the three points are not collinear.
4. *FBC*
5. $\overrightarrow{BA}$
6. $\overrightarrow{BD}$
7. The three segments are $\overline{AB}$, $\overline{BC}$, and $\overline{AC}$.
8. $\overleftrightarrow{PQ}$
9. $\overleftrightarrow{UY}$
10. 15
11. $x = 15$
12. $\overline{BE}$
13. x = 13, *RZ* = 24, and *RT* = 48
14. *D*
15. $m\angle EBG = 45°$; $\angle EBG$ is acute.
    $m\angle EBC = 100°$; $\angle EBC$ is obtuse.
16. 54°
17. $m\angle BOC = 40°$; $m\angle AOB = 45°$
18. 64