Geometry- Mrs. Tilus   Name: _____
Unit 1- Worksheet #1: Identify Points, Lines and Planes

Write in words what each of the following symbols means. Then draw an example for each.

1. Q   2. $\overline{MN}$ 3. $\overrightarrow{ST}$ 4. $\overleftrightarrow{FG}$

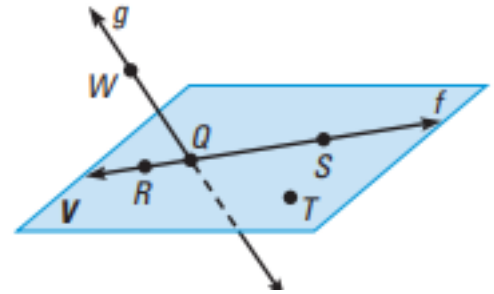**In Exercises 5-9, use the diagram.**

5. Give other names for $\overleftrightarrow{WQ}$

6. Give another name for plane V

7. Name three points that are collinear. Then name a fourth
   Point that is not collinear with these three points.

8. Name a point that is not coplanar with R, S, and T.

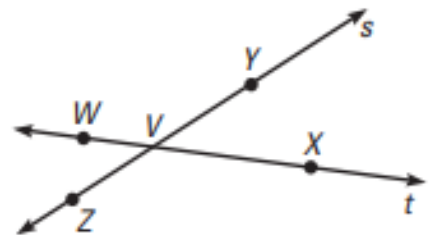9. Is point W coplanar with points Q and R?

In Exercise 10-14, use the diagram.

10. What is another name for $\overleftrightarrow{ZY}$?

11. Name all rays with endpoint V.

12. Name two pairs of opposite rays.

13. Give another name for $\overrightarrow{WV}$

14. A student says that $\overrightarrow{VW}$ and $\overrightarrow{VZ}$ are opposite rays because they have the same endpoint. Describe the error.

15. What statement about the diagram is true?

    A. A, B and C are collinear
    B. C, D, E and G are coplanar
    C. B lies on $\overleftrightarrow{GE}$
    D. $\overrightarrow{EF}$ and $\overrightarrow{ED}$ are opposite rays

Sketch the figure described – *try your best.* ☺

16. Three lines that lie in a plane and intersect at one point

17. One line that lies in a plane and one line that does not lie in the plane.

18. Line AB and line CD intersects at point E, with point E between A and B and between C and D. Which rays are opposite rays?

A. $\overrightarrow{EC}$ and $\overrightarrow{ED}$ B. $\overrightarrow{CE}$ and $\overrightarrow{DE}$ C. $\overrightarrow{AB}$ and $\overrightarrow{BA}$ D. $\overrightarrow{AE}$ and $\overrightarrow{BE}$

In Exercises 19- 24, use the diagram.

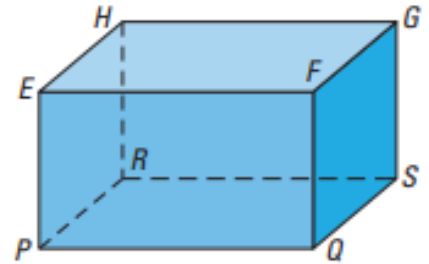19. Name the intersection of $\overleftrightarrow{PR}$ and $\overleftrightarrow{HR}$

20. Name the intersection of plane EFG and plane FGS.

21. Name the intersection of plane PQS and plane HGS.

22. Are points P, Q and F collinear? Are they coplanar?

23. Are point P and G collinear? Are they coplanar?

24. Name three planes that intersect at point E.

Graph the inequality on a number line. Tell whether the graph is a segment, a ray or rays, a point or a line.

25. $x \le 3$ 26. $x \ge -1$ or $x \le 5$ 27. $-7 \le x \le 4$