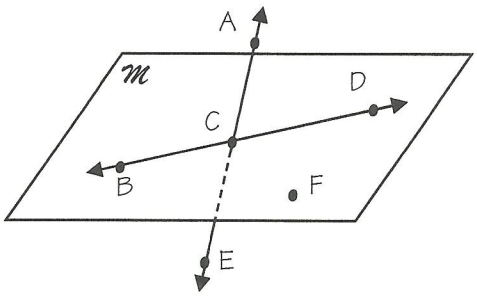
Name_____ Period_____ Date_____

WS 1.1.2 – Points, Lines, and Planes

Refer to the figure below for Exercises 1–12.



Are the points collinear?

1. A, D, E no
2. B, C, D
3. B, C, F no
4. A, E, C
5. F, B, D no

Are the points coplanar?

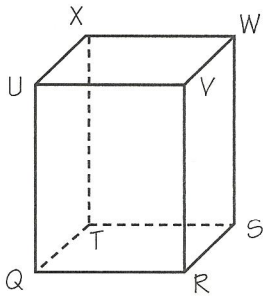
6. B, C, D, F
7. A, C, D, F no
8. B, D, E, F
9. A, C, E, F yes

10. Name plane M in another way.

11. What is the intersection of plane M and $\overleftrightarrow{AE}$? point C

12. What is the intersection of $\overleftrightarrow{AE}$ and $\overleftrightarrow{BD}$?

Refer to the figure below for Exercises 13–26.



Are the following coplanar?

13. Q, V, R yes
14. X, V, R
15. U, V, W, S no
16. W, V, Q, T
17. point X, $\overleftrightarrow{QT}$ yes
18. $\overleftrightarrow{RS}$, point X
19. $\overleftrightarrow{XW}$, $\overleftrightarrow{UV}$ yes
20. $\overleftrightarrow{UX}$, $\overleftrightarrow{WS}$
21. $\overleftrightarrow{UV}$, $\overleftrightarrow{WS}$ no

22. What is the intersection of plane QRST and plane RSWV?

23. What is the intersection of $\overleftrightarrow{UV}$ and plane QTXU? point U

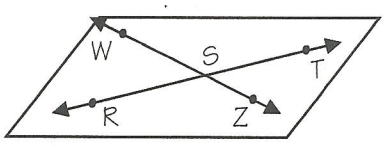
24. Name three lines that intersect at point S.

25. Name two planes that intersect at $\overleftrightarrow{TS}$. QRST and XWST

26. Name another point that is in the same plane as points Q, T, and W.

27. Which of the following is not an acceptable name for the plane shown?

A. plane RSZ
C. plane RSWZ
B. plane RST
D. plane WST



Complete with *always*, *sometimes*, or *never* to make a true statement.

28. Intersecting lines are _____ coplanar.

29. Two planes never intersect in exactly one point.

30. Three points are _____ coplanar.

31. A line and a point not on the line are always coplanar.

32. Four points are _____ coplanar.

33. Two lines never meet in more than one point.

34. Points F(2, 4) and G(4, 8) lie on the graph of $y = 2x$. Determine whether H(-3, -6) is collinear with F and G.