Name_____   Period_____   Date_____
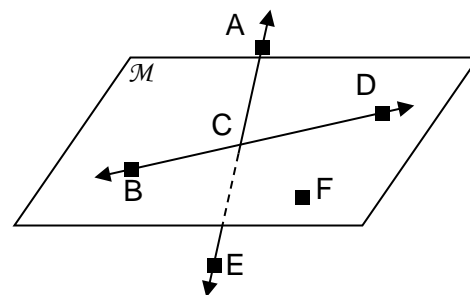
WS 1.1 – Points, Lines, and Planes

Refer to the figure below for Exercises 1–12.

Are the points collinear?

1. A, D, E   2. B, C, D   3. B, C, F

4. A, E, C   5. F, B, D

Are the points coplanar?

6. B, C, D, F   7. A, C, D, F   8. B, D, E, F
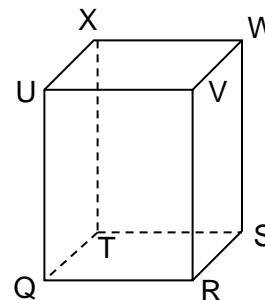
9. A, C, E, F

10. Name plane M in another way.

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

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

Refer to the figure below for Exercises 13–26.

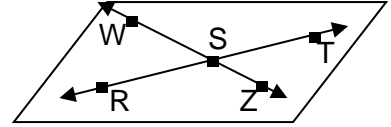Are the following coplanar?

13. Q, V, R   14. X, V, R   15. U, V, W, S

16. W, V, Q, T   17. point X, $\overleftrightarrow{QT}$ 18. $\overleftrightarrow{RS}$, point X

19. $\overleftrightarrow{XW}$, $\overleftrightarrow{UV}$ 20. $\overleftrightarrow{UX}$, $\overleftrightarrow{WS}$ 21. $\overleftrightarrow{UV}$, $\overleftrightarrow{WS}$

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

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

24. Name three lines that intersect at point S.

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

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 _____ intersect in exactly one point.

30. Three points are _____ coplanar.

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

32. Four points are _____ coplanar.

33. Two lines _____ 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.