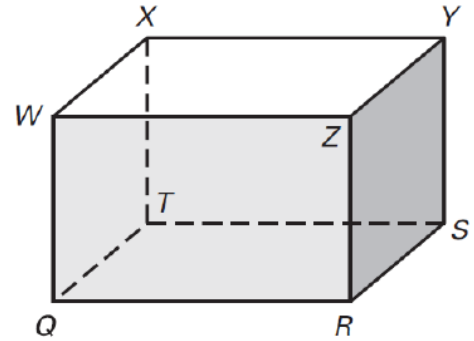# Unit 7.1 Identify pairs of Lines and Angles PRACTICE   **Period:** _____

Think of each segment in the diagram as part of a line.
Complete the statement with parallel, skew, or intersect.

1. $\overleftrightarrow{WZ}$ and $\overleftrightarrow{ZR}$ are   **intersect**

2. $\overleftrightarrow{WZ}$ and $\overleftrightarrow{ST}$ are   **parallel**

3. $\overleftrightarrow{QT}$ and $\overleftrightarrow{YS}$ are   **skew**

4. Plane WZR and plane SYZ are   **intersect**

5. Plane RQT and plane YXW are   **parallel**

Think of each segment in the diagram as part of a line.
Which line(s) or plane(s) appear to fit the description?

6. Line(s) parallel to $\overleftrightarrow{EH}$ $\overleftrightarrow{FG}, \overleftrightarrow{DC}, \overleftrightarrow{AB}$

7. Line(s) perpendicular to $\overleftrightarrow{EH}$ $\overleftrightarrow{AE}, \overleftrightarrow{BH}, \overleftrightarrow{EF}, \overleftrightarrow{HG}$

8. Line(s) skew to $\overleftrightarrow{CD}$ and containing point F $\overleftrightarrow{EF}$

9. Plane(s) perpendicular to plane AEH   planes EFG, ABC, ADF, and BCG

10. Plane(s) parallel to plane FGC   plane EHB
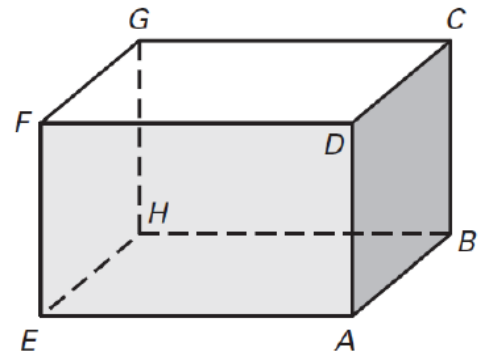
Classify the angle pair as **corresponding,** **alternate interior,** **alternate exterior, or** **consecutive interior angles.**

11. $\angle 1 \ and \ \angle 9$ **corresponding**

12. $\angle 8 \ and \ \angle 13$ **consecutive interior angles**

13. $\angle 6 \ and \ \angle 16$ **alternate exterior**

14. $\angle 4 \ and \ \angle 10$ **alternate interior**

15. $\angle 8 \ and \ \angle 16$ **corresponding**

16. $\angle 10 \ and \ \angle 13$ **consecutive interior angles**
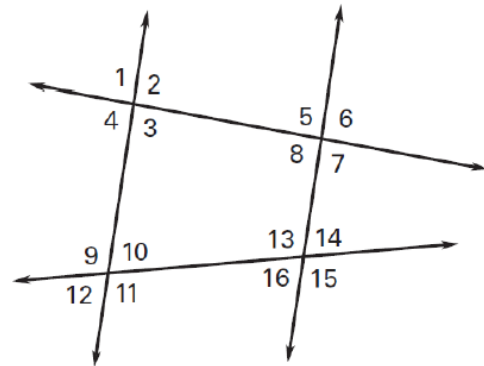
Use the figure at the right to answer the following questions.

17. Name a pair of parallel lines. $\overleftrightarrow{PM} \parallel \overleftrightarrow{QS}$

18. Name a pair of perpendicular lines. $\overleftrightarrow{VN} \perp \overleftrightarrow{RT}$

19. Is $\overleftrightarrow{OL} \parallel \overleftrightarrow{TR}$?   **NO**   Why? The lines intersect

20. Is $\overleftrightarrow{OL} \perp \overleftrightarrow{TR}$?   **NO**   Why? There is no right angle symbol
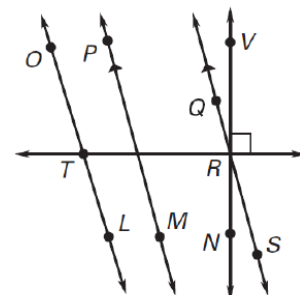
Fill in the blank with the correct word: sometimes, always, or never

21. If two lines are parallel, then they **never** intersect.

22. If one line is skew to another, then they are **never** coplanar.

23. If two lines intersect, then they are **sometimes** perpendicular.

24. If two lines are coplanar, then they are **sometimes** parallel.

Add the lines to the figure at the right.

25. Add a line through M and parallel to $\overleftrightarrow{NP}$.

26. Add a line through N and perpendicular to $\overleftrightarrow{MP}$.

27. Add a line through M and perpendicular to $\overleftrightarrow{MP}$.

28. Add a line through P and parallel to $\overleftrightarrow{MN}$.
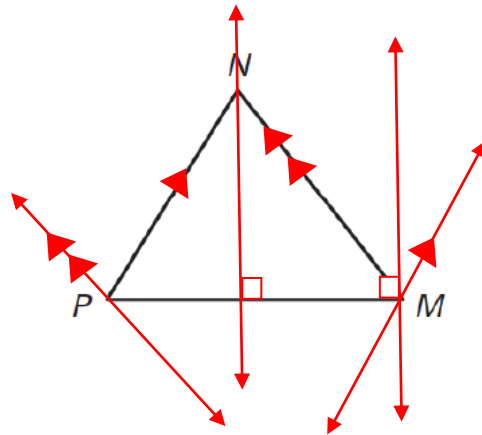
Use the figure at the right to decide whether each statement is TRUE or FALSE.

29. The planes containing the platforms outside of each pair of windows are parallel to the ground. **TRUE**

30. The planes containing the stairs are parallel to each other. **TRUE**

31. The planes containing the platforms outside of each pair of windows are perpendicular to the planes containing the stairs. **FALSE**

32. The planes containing the platforms outside of each pair of windows are perpendicular to the plane containing the side of the building with the fire escape. **TRUE**
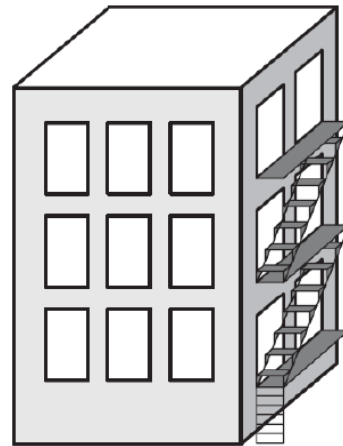
If line g and line h are parallel, then give the degrees of the missing angles. Corresponding angles that are formed from parallel lines are congruent.

33. $m\angle A = 100°$		34. $m\angle B = 130°$
35. $m\angle C = 50°$		36. $m\angle D = 100°$
37. $m\angle E = 80°$		38. $m\angle F = 50°$
39. $m\angle G = 130°$		40. $m\angle H = 80°$
41. $m\angle I = 100°$		42. $m\angle J = 130°$
43. $m\angle K = 100°$		44. $m\angle L = 80°$
45. $m\angle M = 50°$		46. $m\angle N = 130°$