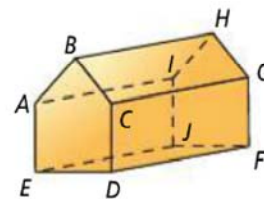# HW: p. 145: 30-44 all and p. 146: 53-60 all

In Exercises 30–35, describe the statement as *true* or *false*. If false, explain. Assume that lines and planes that appear to be parallel are parallel.

30. $\overleftrightarrow{CB} \parallel \overleftrightarrow{HG}$

31. $\overleftrightarrow{ED} \parallel \overleftrightarrow{HG}$

32. plane *AED* ∥ plane *FGH*

33. plane *ABH* ∥ plane *CDF*

34. $\overleftrightarrow{AB}$ and $\overleftrightarrow{HG}$ are skew lines.

35. $\overleftrightarrow{AE}$ and $\overleftrightarrow{BC}$ are skew lines.

36. **Think About a Plan** A rectangular rug covers the floor in a living room. One of the walls in the same living room is painted blue. Are the rug and the blue wall parallel? Explain.
   - Can you visualize the rug and the wall as geometric figures?
   - What must be true for these geometric figures to be parallel?

In Exercises 37–42, determine whether each statement is *always, sometimes,* or *never* true.

37. Two parallel lines are coplanar.

38. Two skew lines are coplanar.

39. Two planes that do not intersect are parallel.

40. Two lines that lie in parallel planes are parallel.

41. Two lines in intersecting planes are skew.

42. A line and a plane that do not intersect are skew.

43. a. **Writing** Describe the three ways in which two lines may be related.
   b. Give examples from the real world to illustrate each of the relationships you described in part (a).

44. **Open-Ended** The letter Z illustrates alternate interior angles. Find at least two other letters that illustrate pairs of angles presented in this lesson. Draw the letters. Then mark and describe the angles.

Mixed Review

If $m\angle YDF = 121$ and $\overrightarrow{DR}$ bisects $\angle FDI$, find the measure of each angle.

53. $\angle IDA$

54. $\angle YDA$

55. $\angle RDI$
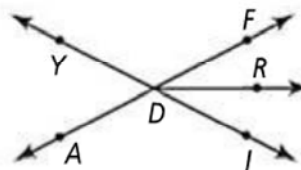
56. What are the next two terms in the sequence 1, −2, 4, −8, . . .?

Get Ready! To prepare for Lesson 3-2, do Exercises 57–60.

Classify each pair of angles.

57. $\angle 4$ and $\angle 2$

58. $\angle 6$ and $\angle 3$

59. $\angle 4$ and $\angle 5$

60. $\angle 6$ and $\angle 7$