Answers for 3.1

For use with pages 150–152

3.1 Skill Practice

1. transversal

2. No; the legs intersect the tabletop.

3. $\overleftrightarrow{AB}$ **4.** $\overleftrightarrow{BC}$

5. $\overleftrightarrow{BF}$ **6.** plane ABF

7. $\overleftrightarrow{MK}, \overleftrightarrow{LS}$ **8.** $\overleftrightarrow{PQ}, \overleftrightarrow{PN}$

9. No. *Sample answer:* The lines intersect.

10. No. *Sample answer:* There is no right angle symbol indicating they are perpendicular.

11. $\angle 1$ and $\angle 5$, $\angle 3$ and $\angle 7$, $\angle 2$ and $\angle 6$, $\angle 4$ and $\angle 8$

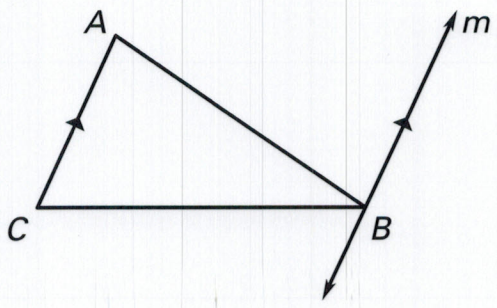
12. $\angle 3$ and $\angle 6$, $\angle 4$ and $\angle 5$

13. $\angle 1$ and $\angle 8$, $\angle 2$ and $\angle 7$

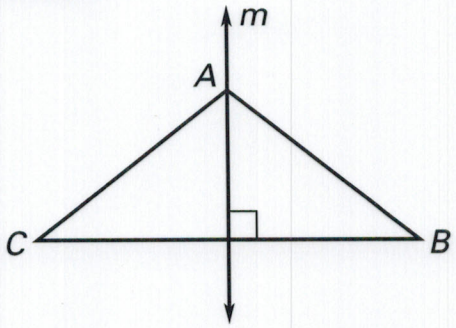
14. $\angle 3$ and $\angle 5$, $\angle 4$ and $\angle 6$

15. $\angle 1$ and $\angle 8$ are not in corresponding positions. $\angle 1$ and $\angle 8$ are alternate exterior angles.

16. 1 line



17. 1 line



18. corresponding

19. consecutive interior

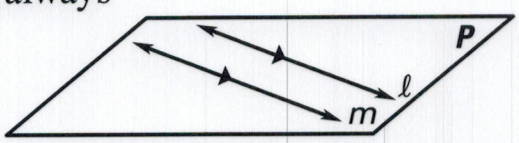
20. consecutive interior

21. alternate exterior

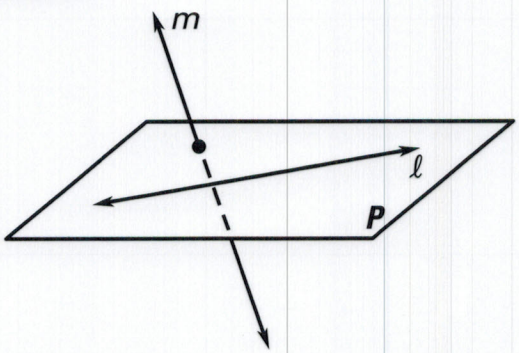
22. alternate interior

23. corresponding

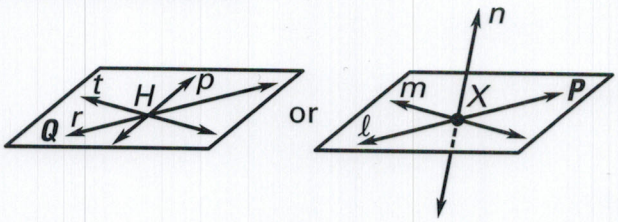
24. always



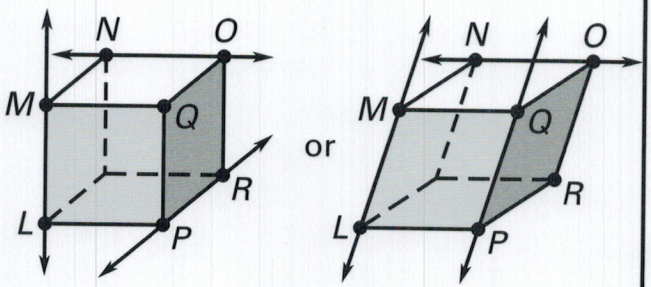
25. never



26. sometimes



27. sometimes



28. B

29. $\angle CFJ$, $\angle HJG$

30. $\angle CJH$

31. $\angle DFC$, $\angle CJH$

32. $\angle GJH$

33. a. 80°, 80°

b. 70°, 70°

c. If parallel lines are cut by a transversal then alternate exterior angles are congruent.

3.1 Problem Solving

34. parallel **35.** skew

36. Check students' work.

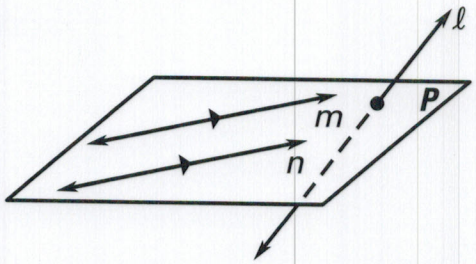
37. A

38. Check students' work.

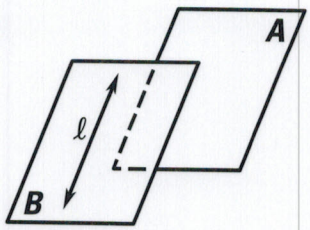
39. The adjacent interior angles are supplementary, thus the measure of the other two angles must be 90°.

40. true **41.** false **42.** true

43.



44.



3.1 Mixed Review

45. $\angle A$ is an acute angle.

46. A serving of soup is low sodium.

47. $m\angle 1 = 60°$, $m\angle 2 = 120°$, $m\angle 3 = 60°$

48. $m\angle 1 = 70°$, $m\angle 2 = 110°$, $m\angle 3 = 70°$

49. $m\angle 1 = 130°$, $m\angle 2 = 50°$, $m\angle 3 = 130°$