

Answers for Lesson 7-2, pp. 309–310 Exercises

1–2. Answers may vary. Samples are given.

1. $\angle 2$ and $\angle 4$

2. $\angle 2$ and $\angle 6$

3. \overleftrightarrow{UV}

4. $\angle 1, \angle 3, \angle 7$

5. False; corresponding angles lie on the same side of a transversal, but alternate interior angles do not.

6. alternate interior

7. corresponding

8. neither

9. alternate interior

10. neither

11. corresponding

12. corresponding

13. neither

14. 58°

15. 122°

16. 122°

17. 122°

18. 58°

19. 58°

20. Corresponding angles are congruent.

21. Alternate interior angles are congruent.

22. Alternate interior angles are congruent.

23. no

24. $m\angle 2 = 42^\circ$; $m\angle 3 = 138^\circ$

25. No parallel lines; alternate interior angles are not congruent.

26. $y \parallel w$; corresponding angles are congruent.

27. $a \parallel b$; 70° and 110° are supplementary and adjacent.

Corresponding angles are congruent and alternate interior angles are congruent.

28. Answers may vary. Sample: Lines t and m are perpendicular, so they form a 90° angle. Since m is parallel to n , lines t and n must also form a 90° angle. So t is perpendicular to n .

29. $m\angle 1 = 70^\circ$; $m\angle 2 = 70^\circ$;
 $m\angle 3 = 110^\circ$; $m\angle 4 = 110^\circ$

Answers for Lesson 7-2, pp. 309–310 Exercises (cont.)

30. They are congruent; they are vertical angles of congruent alternate interior angles.

31. a. $m\angle 1 = 80^\circ$; $m\angle 2 = 40^\circ$;
 $m\angle 3 = 60^\circ$

b. 180°

32. B

33. 0.75

34. 13.50

35. 6.5

36. 12.65

37. 31.98

38. 5.04

39. 123.38