Answers for Lesson 6-1, pp. 308–311 Exercises
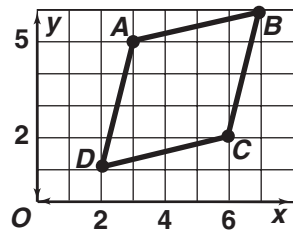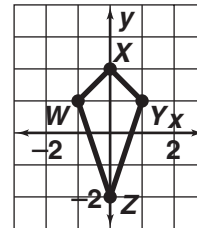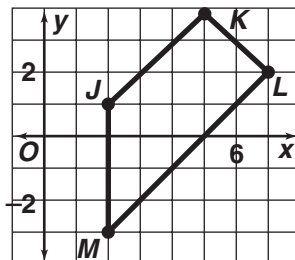
1. ▱, rectangle, rhombus, square

2. parallelogram

3. trapezoid

4. ▱, rhombus

5. kite

6. trapezoid, isosc. trapezoid

7. rhombus

8. parallelogram

9. rhombus

10. rectangle

11. kite

12. isosc. trapezoid

13. rhombus
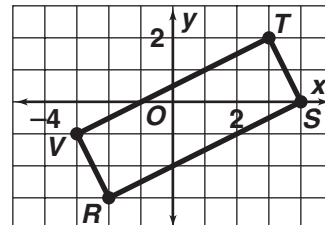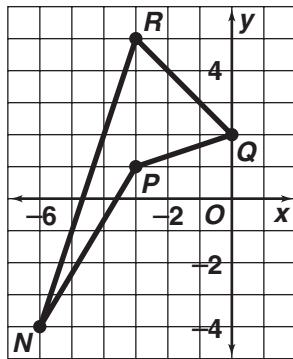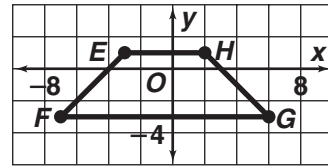
14. kite

15. trapezoid

16. rectangle

17. quadrilateral

18. isos. trapezoid

19. $x = 11, y = 29$; 13, 13, 23, 23

20. $x = 4, y = 4.8$; 4.5, 4.5, 6.8, 6.8

21. $x = 2, y = 6$; 2, 7, 7, 2

22. $x = 1$; 4, 2, 4, 7

23. $x = 3, y = 5$; 15, 15, 15, 15

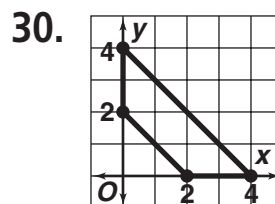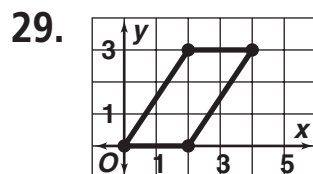**24.** $x = 5, y = 4$; 3, 3, 3, 3

25. 40, 40, 140, 140; 11, 11, 15, 32

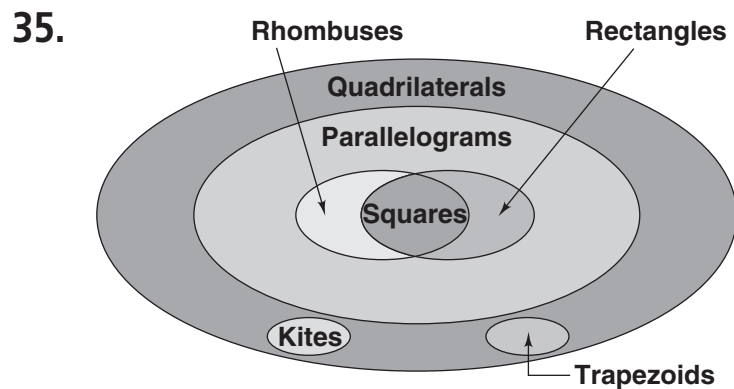**26.** 58, 58, 122, 122; 6, 6, 6, 6

27. rectangle, square, trapezoid
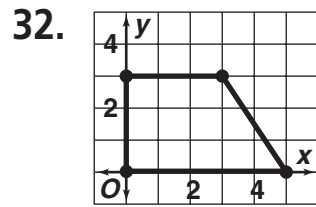
28. D

29–34. Answers may vary. Samples are given.

29.

30.

31. Impossible; a trapezoid with one rt. ∠ must have another, since two sides are ‖.

32.

33.

34.

35.

Rhombuses   Rectangles

Quadrilaterals

Parallelograms

Squares

Kites

Trapezoids

36. True; a square is both a rectangle and a rhombus.

37. False; a trapezoid only has one pair of ∥ sides.

38. False; a kite does not have ≅ opp. sides.

39. True; all squares are ▱.

40 False; kites are not ▱.

41. False; only rhombuses with rt. ∠s are squares.

42. Rhombus; all 4 sides are ≅ because they come from the same cut.

43. Check students' work.

44. A rhombus has 4 ≅ sides, while a kite has 2 pairs of adj. sides ≅, but no opp. sides are ≅. Opp. sides of a rhombus are ∥, while opp. sides of a kite are not ∥.

45–48. Check students' sketches.

45. some isos. trapezoids, some trapezoids

46. ▱, rhombus, rectangle, square

47. rectangle, square

48. rhombus, square, kite, some trapezoids

49. A trapezoid has only one pair of ∥ sides.

50–53. Check students' sketches.

50. rectangle, ▱, kite

51. rhombus, ▱

52. square, rhombus, ▱

53. rhombus, ▱, kite

54–55. Check students' work.

56–59. Explanations may vary. Samples are given.

56. ▱, rectangle, trapezoid

57. ▱, kite, rhombus, trapezoid, isos. trapezoid

58. kite, ▱, rhombus, trapezoid, isos. trapezoid

59. ▱, rectangle, square, rhombus, kite, trapezoid