Name: Due Date: Teacher: Parent Sign:

Answers

1. Rectangle

2. 6 square units

3. Example: (0,0), (2,0), (2,2), (0,2)

4. Yes

5. (-1,0), (3,0), (3,4), (-1,4)

6. 8 square units

7. Example: bottom base length 5 on y=1: (0,1) to (5,1); top base length 3 on y=4 centered or shifted, example vertices (1,4) and (4,4) plus (0,1),(5,1)

8. Yes

9. 4 units

10. 3 units

11. 12 square units

12. Base = 6, height = 3, area = 18 square units

13. Base length = 5, height = 5, area = 25 square units

14. Base = 4, height = 3, area = 12 square units

15. Missing vertex D = (1,6)

16. Missing vertex C = (2,4)

17. (7,5)

18. (3,7)

19. (1,4) and (6,1) opposite corners given, other two are (1,1) and (6,4) — (so the pair is (1,4) and (6,1) complement to the given opposite vertices)

20. (-3,3)

21. Square (also a rectangle)

22. Parallelogram (a trapezoid? Actually this is a parallelogram)

23. Parallelogram

24. Length = 4 (x: 2 to 6), Width = 3 (y: 2 to 5)

25. Length = 4 (x: -1 to 3), Width = 4 (y: 0 to 4)

26. Length = 5 (x: 2 to 7), Width = 5 (y: -2 to 3)

27. Area = 60 square units

28. Width = 5 (x: -4 to 1), Height = 4 (y: -2 to 2), Area = 20 square units

29. Lengths: one side 4 (1 to 5 in y), one side 5 (1 to 6 in x) so perimeter = 2(4+5)=18 units

30. Diagonal length = $\sqrt{4^2 + 3^2} = \sqrt{25} = 5$ (exact value 5)

31. Fourth vertex D = A + C - B = (1,1) + (7,4) - (5,1) = (3,4)

32. Fourth vertex = (1,0) because (-2,0) + (4,3) - (1,3) = (1,0)

33. Fourth vertex = (0,5) (since (0,5) completes parallelogram: (0,5) = (0,2) + (5,5) - (3,2) or compute similarly)

34. Fourth vertex = (5,3) (vector method: 4th = (2,0) + (9,3) - (6,0) = (5,3))

35. Fourth vertex = (5,4) (since (-1,1)+(1,4)-(3,1)?? Wait check: better compute: Given (-1,1), (3,1), (1,4). Opposite of (-1,1) is (1,4)+(3,1)-? Using method: missing = A + C - B where A(-1,1), B(3,1), C(1,4) gives (-1+1-3, 1+4-1) = (-3,4). But that seems off; let's recalc properly: If vertices are V1(-1,1), V2(3,1), V3(1,4) and missing V4 = V1 + V3 - V2 = (-1+1-3, 1+4-1) = (-3,4). So answer = (-3,4)

36. Base length = 5, height = 3, area = 15 square units

37. Base = 5, height = 4, area = 20 square units

38. Base length = 4 (from -3 to 1), height = 2 (from y=0 to y=2), area = 8 square units

39. Yes, it is a parallelogram. Base = 4 (1→5), height = 2 (y=1→3), area = 8 square units

40. No

41. Vertices: (-2,0), (3,0), (3,4), (-2,4)

42. Fourth vertex = (6,7)

43. Vertices: (2,2), (5,2), (5,5), (2,5)

44. Area = 9 square units

45. Yes (it is a square)

46. True

47. Base = 4, height = 2, area = 8 square units

48. New vertices: (4,1), (8,1), (8,4), (4,4)

49. Area = base × height = 4 × 3 = 12 square units (confirmed)

50. Base length = 4 (0→4), height = 2 (y=0→2), area = 8 square units