Each problem below is based on an arithmetic sequence.  $a_n$  is the *n*th term in the sequence. d is the common difference.  $s_n$  is the sum of the first n terms of the sequence. Please solve each problem below:

1. 
$$S_1 = 9, S_{27} = 324, a_7 = ?$$

2. 
$$d = -0.1, S_{37} = -370, a_{18} = ?$$

3. 
$$S_9 = -117, a_4 = -8, d = ?$$

4. 
$$a_3 = 11, S_{25} = 400, d = ?$$

5. 
$$d = -0.5, a_4 = -12, a_1 = ?$$

6. 
$$S_{37} = -703, a_9 = -14, a_2 = ?$$

7. 
$$S_{23} = 851, S_{27} = 1215, d = ?$$

8. 
$$d = 3, a_9 = 32, a_{15} = ?$$

9. 
$$d = -5, S_{37} = -3589, S_1 = ?$$

10. 
$$d = -0.5, S_{33} = -297, a_6 = ?$$

11. 
$$S_1 = -1, S_{11} = 0, d = ?$$

12. 
$$S_{37} = 351.5, S_{23} = 138, S_{41} = ?$$

13. 
$$d = 2, a_1 = 7, a_8 = ?$$

14. 
$$a_6 = 2, a_{16} = 22, S_{19} = ?$$

15. 
$$d = -5, S_{19} = -703, a_7 = ?$$

16. 
$$S_1 = -9, a_3 = -9, d = ?$$

17. 
$$S_7 = 35, a_7 = 5, d = ?$$

18. 
$$S_{31} = -1984, S_3 = -24, S_7 = ?$$

19. 
$$S_{41} = 246, S_{25} = 200, d = ?$$

20. 
$$d = 0.1, S_{37} = 370, a_2 = ?$$

21. 
$$S_{35} = 1050, a_3 = 0, S_{37} = ?$$

22. 
$$d = -1, a_7 = -11, a_2 = ?$$

23. 
$$d = -3, S_{35} = -1540, S_{17} = ?$$

24. 
$$S_1 = 5, a_7 = -19, d = ?$$

25. 
$$a_{15} = -24, S_{39} = -1326, d = ?$$

26. 
$$d = 5, a_1 = 4, a_7 = ?$$

27. 
$$a_9 = -0.5, a_{10} = 0, S_{33} = ?$$

28. 
$$d = 0.5, a_4 = 8, a_{13} = ?$$

29. 
$$S_7 = -63, S_1 = 0, S_{29} = ?$$

30. 
$$d = 4, a_8 = 29, S_{19} = ?$$

31. 
$$a_1 = -7, a_{14} = -59, d = ?$$

32. 
$$d = 0.5, S_1 = 2, S_9 = ?$$

33. 
$$d = -0.1, S_{17} = -17, S_1 = ?$$

34. 
$$S_{39} = 1092, a_{21} = 30, d = ?$$

35. 
$$d = 3, a_5 = 18, S_{15} = ?$$

36. 
$$S_{31} = 1674, a_1 = 9, S_{11} = ?$$

37. 
$$a_{15} = -38, S_9 = -72, d = ?$$

38. 
$$d = -1, a_{13} = -11, S_{39} = ?$$

39. 
$$S_3 = -15, a_{10} = 11, S_{33} = ?$$

40. 
$$d = -2, a_3 = 0, S_{39} = ?$$

41. 
$$S_{33} = -1947, a_5 = -11, d = ?$$

42. 
$$d = 1, a_{13} = 18, S_7 = ?$$

43. 
$$a_{10} = -4, S_5 = -30, a_4 = ?$$

44. 
$$a_{17} = 48, S_5 = 30, d = ?$$

45. 
$$S_{19} = -437, S_{11} = -121, S_{25} = ?$$

46. 
$$d = 4, a_{18} = 73, a_{20} = ?$$

47. 
$$S_{15} = -570, a_{12} = -54, d = ?$$

48. 
$$S_{41} = 2009, S_{29} = 1073, d = ?$$

49. 
$$a_{17} = -2, a_{15} = -3, a_7 = ?$$

50. 
$$d = 4, a_4 = 2, S_{21} = ?$$

51. 
$$d = -1, a_{19} = -15, S_{15} = ?$$

52. 
$$d = -4, a_{14} = -56, a_{13} = ?$$

53. 
$$d = 4, S_{29} = 1595, a_{18} = ?$$

54. 
$$d = -0.5, S_{39} = -390, S_{35} = ?$$

55. 
$$d = -0.1, S_9 = 18, S_{15} = ?$$

56. 
$$a_{13} = -1.1, S_{27} = -27, a_3 = ?$$

57. 
$$S_{29} = -58, a_5 = -3, S_{19} = ?$$

58. 
$$S_{17} = 153, S_{31} = 372, d = ?$$

59. 
$$d = 4, a_6 = 29, a_{11} = ?$$

60. 
$$d = 0.2, a_1 = 9, a_{10} = ?$$

61. 
$$d = -0.1, a_{16} = -6, S_{13} = ?$$

62. 
$$a_{17} = 4, S_{11} = -22, d = ?$$

63. 
$$d = 0.1, a_{11} = 2, a_3 = ?$$

64. 
$$S_{21} = 42, S_{41} = -123, S_{13} = ?$$

65. 
$$a_{18} = 34, S_{37} = 1332, S_{33} = ?$$

66. 
$$d = 0.2, S_{25} = 50, a_{19} = ?$$

67. 
$$a_{14} = 73, S_1 = 8, d = ?$$

68. 
$$S_{27} = 54, a_1 = 1, d = ?$$

69. 
$$a_6 = 2, a_{11} = 3, d = ?$$

70. 
$$d = 5, a_7 = 36, S_{39} = ?$$

71. 
$$d = -1, S_{27} = -459, a_5 = ?$$

72. 
$$S_{27} = -1134, a_6 = -10, S_{39} = ?$$

73. 
$$d = -5, a_{16} = -68, a_7 = ?$$

74. 
$$d = 5, a_{19} = 89, a_{14} = ?$$

75. 
$$S_{25} = -95, S_{21} = -84, a_3 = ?$$

76. 
$$a_1 = 9, S_{39} = 1833, d = ?$$

77. 
$$a_8 = 24, a_9 = 28, S_{39} = ?$$

78. 
$$d = -0.5, a_{16} = -10, S_{17} = ?$$

79. 
$$d = -1, S_{39} = -702, a_{12} = ?$$

80. 
$$d = -5, S_3 = -39, S_{19} = ?$$

81. 
$$d = -3$$
,  $S_{39} = -2340$ ,  $S_{35} = ?$ 

82. 
$$S_{37} = -74, S_{29} = -29, a_2 = ?$$

83. 
$$d = -1, S_{11} = 33, a_2 = ?$$

84. 
$$d = 5, S_3 = 0, a_8 = ?$$

85. 
$$d = -0.1, S_{27} = 81, S_{41} = ?$$

86. 
$$d = 3, S_{13} = 195, S_1 = ?$$

87. 
$$S_{19} = -19, S_1 = 0, d = ?$$

88. 
$$S_{31} = 1860, a_4 = 12, a_{15} = ?$$

89. 
$$d = -0.1, S_5 = 10, S_{25} = ?$$

90. 
$$d = -2, a_8 = -7, a_{12} = ?$$

91. 
$$a_{15} = -1, S_{17} = -17, d = ?$$

92. 
$$a_3 = 2, a_8 = 3, S_{17} = ?$$

93. 
$$a_8 = 15, S_{35} = 1575, d = ?$$

94. 
$$d = 0.5, S_{29} = 377, S_{33} = ?$$

95. 
$$a_6 = 11, a_{16} = 13, S_{39} = ?$$

96. 
$$d = -0.1, S_{27} = -216, a_2 = ?$$

97. 
$$a_{10} = -51, S_{17} = -782, d = ?$$

98. 
$$d = 2, a_{17} = 33, a_{10} = ?$$

99. 
$$a_5 = -14, S_{17} = -374, a_{17} = ?$$

100. 
$$d = 1, S_{15} = 60, S_{37} = ?$$