Name _____ Class _____ Date _____

# Practice 11-2

Arithmetic Sequences

**Find the 43rd term of each sequence.**

1. 12, 14, 16, 18, . . .
2. 13.1, 3.1, −6.9, −16.9, . . .
3. 19.5, 19.9, 20.3, 20.7, . . .
4. 27, 24, 21, 18, . . .
5. 2, 13, 24, 35, . . .
6. 21, 15, 9, 3, . . .
7. 1.3, 1.4, 1.5, 1.6, . . .
8. −2.1, −2.3, −2.5, −2.7, . . .
9. 45, 48, 51, 54, . . .

**Is the given sequence arithmetic? If so, identify the common difference.**

10. 2, 3, 5, 8, . . .
11. 0, −3, −6, −9, . . .
12. 0.9, 0.5, 0.1, −0.3, . . .
13. 3, 8, 13, 18, . . .
14. 14, −15, −44, −73, . . .
15. 3.2, 3.5, 3.8, 4.1, . . .
16. −34, −28, −22, −16, . . .
17. 2.3, 2.5, 2.7, 2.9, . . .
18. 127, 140, 153, 166, . . .

**Find the missing term of each arithmetic sequence.**

19. . . . 23, ▭ , 49, . . .
20. 14, ▭ , 28, . . .
21. . . . 29, ▭ , 33, . . .
22. . . . 14, ▭ , 15, . . .
23. . . . −45, ▭ , −39, . . .
24. . . . −5, ▭ , −2, . . .
25. −2, ▭ , 2, . . .
26. . . . −6, ▭ , 2, . . .
27. −34, ▭ , 77, . . .
28. . . . −45, ▭ , −12, . . .
29. −2, ▭ , 456, . . .
30. . . . 34, ▭ , 345, . . .

**Find the arithmetic mean $a_n$ of the given terms.**

31. $a_{n-1} = 2, a_{n+1} = 7$
32. $a_{n-1} = 13.2, a_{n+1} = 15.8$
33. $a_{n-1} = 29, a_{n+1} = -11$
34. $a_{n-1} = \frac{2}{5}, a_{n+1} = \frac{4}{5}$
35. $a_{n-1} = 15, a_{n+1} = -17$
36. $a_{n-1} = -6, a_{n+1} = -7$

37. Each year, a volunteer organization expects to add 5 more people to the number of shut-ins for whom the group provides home maintenance services. This year, the organization provides the service for 32 people.
    a. Write a recursive formula for the number of people the organization expects to serve each year.
    b. Write the first five terms of the sequence.
    c. Write an explicit formula for the number of people the organization expects to serve each year.
    d. How many people would the organization expect to serve in the 20th year?