Name_____ Period_____

Section 11-1 to 11-3 Review

1. Write the next two terms in the sequence 3, 8, 13, 18, . . .

   [A] 24, 29 [B] 33, 38 [C] 22, 27 [D] 23, 28

   [1] _____

2. Write the first five terms of the sequence defined by the given recursive or explicit formula.

   $t_1 = -2,\ t_2 = 3$

   $t_{n+2} = -5t_{n+1} - 4t_n$

   [A] –2, 3, –15, 75, –375 [B] –2, 3, 23, 103, 423 [C] –2, 3, –23, 127, –727 [D] –2, 3, –7, 23, –87

   [2] _____

3. Evaluate the sum: $\sum_{k=2}^{8} (3k - 2)$ [A] 87 [B] 92 [C] 22 [D] 91

   [3] _____

4. Write the terms of the series. Then evaluate the sum.

   $\sum_{k=2}^{5} (3k + 1)$

   [A] 7 + 10 + 13; 30 [B] 7 + 10 + 13 + 16; 46 [C] 7 + 10 + 13; 46 [D] 7 + 10 + 13 + 16; 30

   [4] _____

5. The average cost of an automobile in the U.S. in 1991 was $19,995. Since then, average increases have occurred at a rate of $1763 yearly. Write the general term for the arithmetic sequence modeling automobile costs, where n =1 corresponds to 1991.

[A] $t_n = 1763 + 19{,}995n$ [B] $t_n = 19{,}995 + 1763n$

[C] $t_n = 19{,}995 - 18{,}232n$ [D] $t_n = 18{,}232 + 1763n$

[5] _____

6. Use the given formula to find the first four terms of the arithmetic sequence.
$t_n = -33 + 7n$

[A] –19, –12, –5, 2 [B] –26, –19, –12, –5 [C] –26, –182, –1274, –8918 [D] –26, –33, –40, –47

[6] _____

7. Find the three arithmetic means between –3 and –27.

[A] –6, –12, –18 [B] –6, –13, –20 [C] –9, –12, –15 [D] –9, –15, –21

[7] _____

8. Find the four arithmetic means between –10 and 110.

[A] 14, 38, 62, 86 [B] 24, 48, 72, 96 [C] 17, 40, 63, 86 [D] 14, 4, –6, –16

[8] _____

9. A 50-row theater has 20 seats in the front row. The second row has 21 seats. If each row has one more than the row in front of it, how many seats are there in the theater?

[A] 4450 [B] 2250 [C] 4500 [D] 2225

[9] _____

10. Evaluate the sum. $\sum_{k=1}^{19}(5k+4)$

[A] 1073.5 [B] 950 [C] 113 [D] 1026

[10] _____