Sequences and Exponental Functions Practice Test

1) Write the explicit formula for the sequence:

$37, 55, 73, 91...$

2) Write the explicit formula for the sequence:

$22, 30, 38, 46...$

3) Write the explicit formula for the sequence:

$11, 88, 704, 5632...$

4) Write the explicit formula for the sequence:

$2, 18, 162, 1458...$

5) Write the first four numbers of sequence given the following explicit formula:

$a_n = -9n - 24$

6) Write the first four numbers of sequence given the following explicit formula:

$a_n = -14n + 13$

7) Write the first four numbers of sequence given the following explicit formula:

$a_n = 14(7)^{n-1}$

8) Write the first four numbers of sequence given the following explicit formula:

$a_n = -6(9)^{n-1}$

9) You have \$4708 in a bank account that pays 2% interest. Write an equation for how much money you will have after 12 years.

10) You have \$8951 in a bank account that pays 4% interest. Write an equation for how much money you will have after 11 years.

---

11) There are 594 bacteria present in a colony. The number of bacteria doubles every 8 hours. Write an equation for how many bacteria will be present after 64 hours have passed.

---

12) There are 398 bacteria present in a colony. The number of bacteria doubles every 9 hours. Write an equation for how many bacteria will be present after 36 hours have passed.

Answer Key: 1) $a_n = 18n + 19$ 2) $a_n = 8n + 14$ 3) $a_n = 11(8)^{n-1}$ 4) $a_n = 2(9)^{n-1}$ 5) $-33, -42, -51, -60...$ 6) $-1, -15, -29, -43...$ 7) $14, 98, 686, 4802...$ 8) $-6, -54, -486, -4374...$ 9) $4708 * 1.02^{12}$ 10) $8951 * 1.04^{11}$ 11) $594 * 2^8$ 12) $398 * 2^4$