

## 12.1-12.2 Review

Date \_\_\_\_\_ Period \_\_\_\_\_

**Arithmetic:****Find the explicit formula and the recursive formula.**

1) 32, 40, 48, 56, ...

2) 18, 20, 22, 24, ...

**Given a term in an arithmetic sequence and the common difference find the explicit formula.**

3)  $a_{40} = 370$ ,  $d = 10$

**Given two terms in an arithmetic sequence find the explicit formula.**

4)  $a_{18} = 82$  and  $a_{38} = 222$

**Geometric:****Find the explicit formula and the recursive formula.**

5) 4, 8, 16, 32, ...

6) 2, 4, 8, 16, ...

**Given a term in a geometric sequence and the common ratio find the explicit formula.**

7)  $a_4 = -24$ ,  $r = 2$

**Given two terms in a geometric sequence find the explicit formula and the recursive formula.**

8)  $a_4 = 128$  and  $a_1 = 2$

## Answers to 12.1-12.2 Review (ID: 1)

1) Explicit:  $a_n = 32 + (n - 1) \cdot 8$     2) Explicit:  $a_n = 18 + (n - 1) \cdot 2$     3)  $a_n = -20 + (n - 1) \cdot 10$

Recursive:  $a_n = a_{n-1} + 8$

Recursive:  $a_n = a_{n-1} + 2$

$a_1 = 32$

$a_1 = 18$

4)  $a_n = -37 + (n - 1) \cdot 7$

5) Explicit:  $a_n = 4 \cdot 2^{n-1}$

6) Explicit:  $a_n = 2 \cdot 2^{n-1}$

Recursive:  $a_n = a_{n-1} \cdot 2$

Recursive:  $a_n = a_{n-1} \cdot 2$

$a_1 = 4$

$a_1 = 2$

7)  $a_n = -3 \cdot 2^{n-1}$

8) Explicit:  $a_n = 2 \cdot 4^{n-1}$

Recursive:  $a_n = a_{n-1} \cdot 4$

$a_1 = 2$