

Sequence Test Review

Date _____ Period _____

Warm up: 1-6**Determine if the sequence is arithmetic. If it is, find the common difference.**

1) $-19, 11, 41, 71, \dots$

Determine if the sequence is arithmetic. If it is, find the common difference, the explicit formula, and the recursive formula.

2) $-8, -6, -4, -2, \dots$

Given the explicit formula for an arithmetic sequence find the first five terms.

3) $a_n = 26 + (n - 1) \cdot 8$

Given the recursive formula for an arithmetic sequence find the first five terms.

4) $a_n = a_{n-1} - 4$
 $a_1 = -9$

Given the explicit formula for an arithmetic sequence find the 52nd term.

5) $a_n = -2 + (n - 1) \cdot 10$

Find the 52nd term and the explicit formula.

6) $32, 34, 36, 38, \dots$

Determine if the sequence is geometric. If it is, find the common ratio and the three terms in the sequence after the last one given.

7) $-1, -2, -4, -8, \dots$

8) $-4, 16, -64, 256, \dots$

Determine if the sequence is geometric. If it is, find the explicit formula and the recursive formula.

9) $1, 5, 25, 125, \dots$

10) $-1, -2, -4, -8, \dots$

Sequence Test Review

Date _____ Period _____

Warm up: 1-6

Determine if the sequence is arithmetic. If it is, find the common difference.

1) $-19, 11, 41, 71, \dots$

$d = 30$

Determine if the sequence is arithmetic. If it is, find the common difference, the explicit formula, and the recursive formula.

2) $-8, -6, -4, -2, \dots$ Common Difference: $d = 2$

Explicit: $a_n = -10 + 2n$

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

Given the explicit formula for an arithmetic sequence find the first five terms.

3) $a_n = 26 + (n - 1) \cdot 8$

$26, 34, 42, 50, 58$

Given the recursive formula for an arithmetic sequence find the first five terms.

4) $a_n = a_{n-1} - 4$

$a_1 = -9$

$-9, -13, -17, -21, -25$

Given the explicit formula for an arithmetic sequence find the 52nd term.

5) $a_n = -2 + (n - 1) \cdot 10$

$a_{52} = 508$

Find the 52nd term and the explicit formula.

6) $32, 34, 36, 38, \dots$ $a_{52} = 134$

Explicit: $a_n = 30 + 2n$

Determine if the sequence is geometric. If it is, find the common ratio and the three terms in the sequence after the last one given.

7) $-1, -2, -4, -8, \dots$

Common Ratio: $r = 2$

Next 3 terms: $-16, -32, -64$

8) $-4, 16, -64, 256, \dots$

Common Ratio: $r = -4$

Next 3 terms: $-1024, 4096, -16384$

Determine if the sequence is geometric. If it is, find the explicit formula and the recursive formula.

9) $1, 5, 25, 125, \dots$ Explicit: $a_n = 5^{n-1}$

Recursive: $a_n = a_{n-1} \cdot 5$

$a_1 = 1$

10) $-1, -2, -4, -8, \dots$ Explicit: $a_n = -2^{n-1}$

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

$a_1 = -1$