NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_ Score:\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_%=\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Sec 1** | **HW 4-1**  **Arithmetic Sequences: Recursive & Explicit** | **Unit 4** |

**Find the slope of the line that goes between each pair of points.**



1.  and
2.  and
3.  and
4.  and

**For problems #5-7, do the following:**

a) Find the next 3 terms in each sequence.

b) Identify the constant rate.

c) Write a recursive equation for each.

d) Write an explicit equation for each.

e) **Circle** where you see the constant rate show up in the **recursive** AND **explicit** equations.



|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***x*** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | 3 | 8 | 13 | 18 | 23 |  |  |  |

b) constant rate:

c) recursive equation:

d) explicit equation:



|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***x*** | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|  | 11 | 9 | 7 | 5 | 3 |  |  |  |

b) constant rate:

c) recursive equation:

d) explicit equation:



|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***x*** | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 |
|  | 3 | 1.5 | 0 | -1.5 | -3 |  |  |  |

b) constant rate:

c) recursive equation:

d) explicit equation:

**For the remaining questions, determine if the sequence is arithmetic or not.**

If **YES**, then write the recursive and explicit equation and answer the question provided.

If **NO**, then you do not need to answer anything else.

1. **-3, 1, 5, 9, …**  Arithmetic?

Recursive:

Explicit:

Find the 11th term:

1. **-3, -4, -6, -7, …**  Arithmetic?

Recursive:

Explicit:

Find the 30th term:

1.  Arithmetic?

Recursive:

Explicit:

Find the 100th term:

1.  Arithmetic?

Recursive:

Explicit:

Find the 46th term:

**For the remaining questions, determine if the sequence is arithmetic or not.**

If **YES**, then write the recursive and explicit equation and answer the question provided.

If **NO**, then you do not need to answer anything else.

1.  Arithmetic?

Recursive:

Explicit:

Find the 20th term:

1. **– ½ , 0, ½ , …**  Arithmetic?

Recursive:

Explicit:

Find the 13th term: