Explicit Rule CFA

Name: Date:

Directions- Circle the correct answer. For some question there may be more than one right answer. Good Luck and try your best ☺

1. Determine the ***explicit rule*** for the following sequence: 20, 24, 28, 32, 36 . . .

a) Subtract 4 from the previous term

1. y = 4x + 20
2. *y* = 4*x* + 16
3. Add 4 to the previous term
4. Identify the following sequence as ***either arithmetic, geometric or neither***.

7, 4, 1, -2, -5 …

a) arithmetic sequence

b) geometric sequence

c) neither

1. Identify the following sequence as ***either arithmetic, geometric or neither***.

81, 27, 9, 3, 1, 1/3…

a) arithmetic sequence

b) geometric sequence

c) neither

1. Identify the following sequence as either ***arithmetic, geometric or neither***.

1, 1, 2, 3, 5, 8, 13 …

a) arithmetic sequence

b) geometric sequence

c) neither

1. Determine the ***recursive rule*** for the following sequence: -12, -8, -4, 0, 4 …
2. Subtract 4 from the previous term
3. Add 4 to the previous term
4. Add 4 to the next term
5. *y* = 4*x* – 16
6. Write the equation that represents the following pattern: 1, -2, -5, -8, -11 ...
7. y = 1 + 3x
8. y = 1 – 3x
9. y = 4 – 3x
10. y = 4 + 3x
11. Use the following equation to determine the 15th term in the sequence:

y = -5x + 11

1. 86
2. -86
3. -64
4. 64
5. Truss bridges are built using a pattern of steel beams. This pattern has great strength due to weight distribution in the beams. Pictured here is the Shell Creek Bridge in Big Horn County, WY. There is a pattern in this truss design. The total number of beams is related to the number of truss sections.

|  |  |
| --- | --- |
| Sections | Beams |
|  |  |
| 1 | 3 |
| 2 | 7 |
| 3 | 11 |
| 4 | 15 |

Which equation represents the number of beams needed to construct an unknown number of sections?

1. y= 3 + 4x
2. y= 3 + 4 (x – 1)
3. y = 4 + 3x
4. y = 4x - 1

9 . Write the formula for the number of toothpicks needed to create the rectangles below:



1. y = 3x + 4
2. y = 4x + 3
3. y = 4x
4. y = 3x + 1