State whether each of the following representations is a function.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| |  |  | | --- | --- | | x | y | | 2 | 6 | | 3 | 10 | | 4 | 2 | | 5 | 6 | | 6 | 10 | | |  |  | | --- | --- | | x | y | | 1 | 6 | | 3 | 10 | | 1 | 6 | | 3 | 10 | | 2 | 19 | | |  |  | | --- | --- | | x | y | | 1 | 6 | | 0 | 3 | | 4 | 7 | | 5 | -1 | | 6 | -8 | |
| f(1)=18  f(n) = f(n-1) + 6 | y = m(x - x1) + y1 | y=mx + b |

For each sequence, complete the required information.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sequence | Arithmetic or Geometric | Common Ratio or Common difference | Recursive Equation | Explicit Equation |
| -17, -11, -5, 1, 7… |  |  |  |  |
| 13, 39, 117, 351… |  |  |  |  |
| 88, 44, 22, 11… |  |  |  |  |
| 21, 34, 47, 60… |  |  |  |  |

Write an equation in point slope form for each of the given representations.

|  |  |  |
| --- | --- | --- |
| Representation | Equation in Point Slope form y = m(x – x1) + y1 | Equation in Slope Intercept Form y=mx + b |
| A line having a slope of 3 and passing through the point (5, -2) |  |  |
| |  |  | | --- | --- | | x | f(x) | | 3 | 8 | | 4 | 11 | | 5 | 14 | | 6 | 17 | |  |  |
| Image result for linear graph points |  |  |
| |  |  | | --- | --- | | x | f(x) | | -2 | 18 | | -1 | 10 | | 0 | 2 | | 1 | -6 | |  |  |
|  |  |  |

State the range of each function when the domain is given as D = {3,4,5,}

f(x) = 2x + 8 f(x) = 5x  f(x) = 3(2)x