**Functions Review Sheet** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Given the following patterns, finish each table and write the function rule:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **X** | 1 | 2 | 3 | 4 |  | n |
| **Y** | 1 | 3 | 5 |  | 19 |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **X** | 0 | 1 | 2 | 3 |  | n |
| **Y** | 3 | 6 | 9 | 12 | 21 |  |

1. Make a table and graph the following function:

 y = 3x + 2

1. List the domain and range of each relation:

{(2,3) (3,4) (3,5) (4,9) (-1,2)} D:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Is this a function?\_\_\_\_\_\_\_

{(1,4) (2,4) (7,3) (-1,4) (-2,-2)} D:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Is this a function?\_\_\_\_\_\_\_\_

1. Find the range for y = 4x – 3 if the domain is {-4, 0, 1, 2}
2. Determine if the following is a linear function? Why or why not? If it is linear, write the function rule (equation).

|  |  |
| --- | --- |
|  **x**  |  **y** |
|  1 |  6  |
|  2 |  8 |
|  3 |  10 |
|  4 |  12 |

|  |  |
| --- | --- |
|  **x**  |  **y** |
|  1 |  3  |
|  2 |  9 |
|  3 |  27 |
|  4 |  81 |

* 1.

1. Write a function rule for the following: The cost c if a plumber charges $89 for a house call plus $50 per hour to repair a sink
2. Write the following in a table and then determine the domain and the range:

(-4, 6) (3, 8) (2, 4) (1, 3)

* + 1. Domain\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. Range\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. After work, Jan walks slowly toward her home, but stops at a McDonald’s to get a cup of coffee. After 15 minutes, Jan continues walking home. Let the x-axis be time, and the y-axis be the distance from home.
2.  Is the graph below a function? Why or why not?

1. Find each value for f(x) = 3x -3
2. f (2)
3. f(-4)
4. Find each value for g(x) : 2x² + x
5. g(-2)
6. g(4)
7. Complete a table and graph using any value for x, y = 2x +2

