## Warm Up 4.6

Name $\qquad$ Period $\qquad$

## Numbers Warm Up

Fill in the Venn diagram below with the number categories as we have discussed. Use the names and symbols for each set given below the diagram.


Real Number (R)
Rational Numbers (Q)
Integers (Z)

Irrational Numbers (I)
Whole Numbers (W)
Natural Numbers (N)

For the following relations, create a table showing at least three input and output pairs, plot them on a graph, and say what the domain and Range is for each.

1. $\{(4,3),(-2,2),(5,6)\}$
2. $\{(5,-7),(-1,4),(5,-5),(-2,3)\}$
3. $f(x)=3 x-1$
4. $g(1)=5 ; g(n)=g(n-1) \times 4$

Find the geometric means in the tables below.
5.
6.

| x | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| y | 2 |  |  |  | 162 |


| x | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| y | 10 |  |  |  | 0.625 |

7. What does it mean for something to be linear?
8. What does is mean for something to be exponential?
9. What connection is there between sequences and linear and exponential function?
