Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# **Number Systems and Characteristics of Functions**

**Into which group does each number go?**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Natural | Whole | Integers | Rational | Irrational | Real | Imaginary | Complex |
| 22.5 |  |  |  |  |  |  |  |  |
| 3/8 |  |  |  |  |  |  |  |  |
| $$\sqrt[3]{14}$$ |  |  |  |  |  |  |  |  |
| 4-7i |  |  |  |  |  |  |  |  |
| 13i |  |  |  |  |  |  |  |  |
| -18 |  |  |  |  |  |  |  |  |
| $$\sqrt{-18}$$ |  |  |  |  |  |  |  |  |
| 2i-18.4 |  |  |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |  |  |
| 9/4 |  |  |  |  |  |  |  |  |

**Find the domain and range and intervals of increasing and decreasing.**



D = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inc = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Inc = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Inc = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dec = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_





D = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inc = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Inc = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Inc = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dec = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_