Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

Directions: Convert each complex number to the form

|  |  |
| --- | --- |
| 1) | 2) |
|  |  |
| 3) | 4) |

**Challenge Problems**

Directions: These are optional bonus problems you may attempt if you desire.

|  |
| --- |
| **C1)** Suppose you have the function . What would this function look like on the complex plane as *t* goes to infinity? What if *t* goes to negative infinity? Do these two graphs (as *t* goes to positive or negative infinity) intersect, and if so, where?  *Hint: t is a purely real variable. Feel free to use the back of the worksheet to draw a graph.* |
|  |