

PHYSICS 301
1st HOMEWORK
Dr. V. Lempesis

Hand in: Tuesday 2nd of March 2014

Student Name : _____

Student ID: _____

1. For two complex numbers $z_1 = x_1 + iy_1$ and $z_2 = x_2 + iy_2$ ($z_2 \neq 0$) find the number z_1 / z_2 .
2. What geometrical object is represented by the equation $|z - 1 + 3i| = 2$?
3. Express the following complex numbers in exponential form:
 $2 + 2\sqrt{3}i$, $-5 + 5i$.
4. Represent graphically on the x-y plane the following complex numbers:
 $6(\cos 240^\circ + i \sin 240^\circ)$, $2e^{-i\pi/4}$.
5. Find the square root of i .