

## Math 276 Discussion Worksheet 10

1. Express the following complex numbers in the form  $a + bi$ .

a.  $(1 + 2i)(3 + 4i)$       b.  $(1 + i)^3$

2. Express the following complex numbers in the form  $a + bi$ .

a.  $\frac{1 + i}{1 - i}$       b.  $\frac{1 + i^3}{i}$

3. Compute the modulus and principle argument of the following complex numbers.

a.  $1 + i$       b.  $-2i$

4. Compute the conjugate of the following complex numbers.

a.  $(1 + i)(2 + i)$       b.  $\frac{1}{i}$