

Spring, 1999
Peterson

MATH 124.

Homework 2.

DUE: Friday, February 5.

P1. Write each of the following in standard complex number form.

(1) $(3 + 4i) + 2(5 - i)$.

(4) $(2 + 3i)^2$.

(2) $(6 + 7i) - 2(3 - 2i)$.

(5) $\frac{13 - i}{3 - i}$.

(3) $(4 - 3i)(1 + 5i)$.

(6) $\frac{3 + 14i}{2 + i}(3 + i)$.

P2. Find all real/complex number solutions in each case:

(1) $x^2 - 5x + 7 = 0$.

(2) $x^2 - 2x + 5 = 0$.

(3) $2x^2 + 4x + 3 = 0$.

P3.

(1) Find an equation of the circle having center $(-1, 2)$ and containing the point $(3, 7)$.

(2) Find the center and radius of the circle having equation $x^2 + y^2 - 6x + 12y = 19$.

P4. Find an equation of the straight line L in each case:

(1) L has slope 3 and passes through the point $(1, -7)$.

(2) The points $(5, -12)$ and $(2, 9)$ are on L.

(3) L has X-intercept 2, and $(5, 6)$ is a point on L.