

Spring, 1999  
Peterson

MATH 105.

Homework 8.

**DUE: Friday, March 26.**

P1. Factor completely in each case:

(1)  $8x^3 - 27$ .

(2)  $125x^3 + 8y^3$ .

(3)  $12x^2 - 29x + 15$ .

(4)  $12x^2 + 4x - 21$ .

(5)  $90x^3 - 15x^2 - 30x$ .

(6)  $x^3 + 3x^2 - 9x - 27$ .

(7)  $2x^4 - 32x^2$ .

(8)  $15x^4y + 35x^3y - 30x^2y$ .

P2. Solve for  $x$  in each case:

(1)  $x^2 - 14x + 45 = 0$ .

(2)  $x^2 - x = 20$ .

(3)  $2x^2 - x - 21 = 0$ .

(4)  $6x^2 + 13x = 15$ .

(5)  $2x^2 - 5x + 7 = x^2 + 2x + 25$ .

(6)  $(2x - 2)(x - 2) = (x + 8)(x - 3)$ .