Tutorial 3

1. Factorize the following:

a) $x^2 + 6x + 9$	b) $p^2 - 16p + 64$
c) $6x^2 - 54z^2$	d) $4x^2 - 4x + 1$
e) $x^2 - 2x + 1 - y^2$	f) $x^4 - 16$

2. Factorize the following:

a) $x^2 + 5x + 4$	b) $p^2 - 2p - 48$
c) $a^2 + 14a - 72$	d) $4x^2 - 44x + 112$

3. Factorize the following:

a) $6x^2 + 19x + 10$	b) $12p^2 - 25pq - 7q^2$

4. Factorize $x^3 - 6x^2 + 11x - 6$.

Numerical Solutions

1

a) $(x+3)^2$	b) $(p-8)^2$
c) $6(x+3z)(x-3z)$	d) $(2x-1)^2$
e) $(x+y-1)(x-y-1)$	f) $(x-2)(x+2)(x^2+1)_{\#}$

2

a) $x^2+5x+4 = (x+1)(x+4)_{\#}$	b) $p^2-2p-48 = (p-8)(p+6)_{\#}$
c) $a^2+14a-72 = (a+18)(a-4)_{\#}$	d) $4(x-4)(x-7)$

3

a) $6x^2+19x+10 = (2x+5)(3x+2)_{\#}$	b) $12p^2-25pq-7q^2 = (3p-7q)(4p+q)_{\#}$

4 $(x-1)(x-2)(x-3)$