P42

[3] $x^2+6x+9 = (x+3)^2$

[4.1] $x^2+8x+16 = (x+4)^2$

[4.2] $a^2-12a+36 = (a-6)^2$

[4.3] $x^2-20x+100 = (x-10)^2$

[4.4] $x^2+2x+1 = (x+1)^2$

P 43

[5.1] $a^2-4 = (a+2)(a-2)$

[5.2] $9x^2-1 = (3x-1)(3x+1)$

[5.3] $4a^2-25b^2 = (2a+5b)(2a-5b)$

[5.4] $x^2-\frac{y^2}{4} = (x-\frac{y}{2})(x+\frac{y}{2})$

P44

[1.1] $4x^2+8x+4 = 4(x^2-2x+1) = 4(x-1)^2$

[1.2] $-y^2+6y-9 = -[y^2-6y+9] = -(y-3)^2$

[1.3] $8a^2-18 = 2[4a^2-9] = 2(2a-3)(2a+3)$

[1.4] $2x^3-6x^2+4x = 2x[x^2-3x+2] = 2x(x-2)(x-1)$

[2.1] $a(x+y)-b(x+y) = (x+y)(a-b)$

[2.2] $(a+b)x+(a+b)(y+z) = (a+b)(x+y+z)$

[2.3] $m(x+2y)-n(x+2y) = (m-n)(x+2y)$

[2.4] $a(x-y)+2(y-x) = a(x-y)-2(x-y) =$

$= (a-2)(x-y)$

p44, ctd

[3] $(x-3)^2-16$

Let $X = x-3$

$= X^2-16$

$= (x-4)(x+4)$

$= (x-3-4)(x-3+4)$

$= (x-7)(x+1)$