# Correction du devoir n°5 - 3ème

**Ex1 :** $A = (x-7)(6+2x)$
$= 6x + 2x^2 - 42 - 14x$
$= 2x^2 - 8x - 42$

$B = (3y-1)(5-2y)$
$= -15y - 6y^2 - 5 + 2y$
$= -6y^2 + 17y - 5$

$C = (2-3x)^2 - 5(x-4)$
$= 4 - 12x + 9x^2 - 5x + 5$
$= 9x^2 - 17x + 9$

$D = (4y+1)(4y-1)$
$= 16y^2 - 1$

**Ex2 :** $A = 25x^2 + 30x + 9$
$= (5x+3)^2$

$B = 1 - 9x^2$
$= (1+3x)(1-3x)$

$C = (2x+1)(3x-7) - (2x+1)(1-2x)$
$= (2x+1)[(3x-7) - (1-2x)]$
$= (2x+1)(3x-7-1+2x)$
$= (2x+1)(5x-8)$

$D = (x+9)^2 - 9$
$= (x+9+3)(x+9-3)$
$= (x+12)(x+6)$

**Ex3 :** (1) $12 - 4x = 3x - 3$
$-7x = -15$
$x = \frac{-15}{-7}$
$x = \frac{15}{7}$
$S = \{\frac{15}{7}\}$

(2) $(3-4x)(3x+9) = 0$
$3 - 4x = 0$ ou $3x + 9 = 0$
$4x = 3$ ou $3x = -9$
$x = \frac{3}{4}$ ou $x = -3$
$S = \{-3 ; 3/4\}$

(3) $9x^2 - 6x + 1 = 0$
$(3x-1)^2 = 0$
$3x - 1 = 0$
$x = 1/3$
$S = \{1/3\}$

(4) $x^2 - 36 = 0$
$(x+6)(x-6) = 0$
$x + 6 = 0$ ou $x - 6 = 0$
$x = -6$ ou $x = 6$
$S = \{-6 ; 6\}$