

**EXERCICE 1 :**

a. Factoriser les expressions suivantes comme dans l'exemple :

$Z = \underline{(x+1)(x-2)} + 5\underline{(x+1)}$	$A = (x-3)(2x+1) + 7(2x+1)$	$B = (x+1)(x+2) - 5(x+2)$
$Z = (x+1)[(x-2) + 5]$		
$Z = (x+1)(x+3)$		
$C = (3-x)(4x+1) - 8(4x+1)$	$D = 5(1+2x) - (x+1)(1+2x)$	$E = -6(3x-2) - (3x-2)(x-4)$

b. Même consigne que l'exercice précédent :

$Z = \underline{(x+1)(x-2)} + \underline{(x+1)(x+7)}$	$A = (x+1)(3-x) + (x+1)(2+5x)$	$B = (x+2)(x+1) + (x+2)(7x-5)$
$Z = (x+1)[(x-2) + (x+7)]$		
$Z = (x+1)(2x+5)$		
$C = (x+3)(3-2x) - (x+3)(5+x)$	$D = (2x+1)(x-5) - (3x+1)(2x+1)$	$E = (x-6)(2-x) - (2-x)(3+4x)$

c. Même consigne que l'exercice précédent :

$Z = \underline{(x+1)^2} + \underline{(x+1)(x+7)}$	$A = (x+1)^2 + (x+1)(3x+1)$	$B = (2x+1)^2 + (2x+1)(x+3)$
$Z = (x+1)[(x+1) + (x+7)]$		
$Z = (x+1)(2x+8)$		
$C = (x-3)^2 - (x-3)(4x+1)$	$D = (x+1)(2x-5) + (2x-5)^2$	$E = (3x-4)(2-x) - (3x-4)^2$

**EXERCICE 2 :** Transformer l'expression soulignée, pour faire apparaître le facteur commun, puis factoriser :

$Z = (x-1)(x-2) + \underline{(2x-2)(x+7)}$	$A = (x+1)(x+2) + \underline{(2x+2)(3x-4)}$	$B = (x-1)(2x+1) + \underline{(6x+3)(3-x)}$
$Z = \underline{(x-1)(x-2)} + 2\underline{(x-1)(x+7)}$		
$Z = (x-1)[(x-2) + 2(x+7)]$		
$Z = (x-1)(x-2+2x+14)$		
$Z = (x-1)(3x+12)$		
$C = \underline{(10x-5)(x+2)} + (1-x)(2x-1)$	$D = \underline{(4x+4)(1-2x)} + (x+1)^2$	$E = (2x+1)^2 - (x+3)\underline{(10x+5)}$

## CORRIGE – M. QUET

## EXERCICE 1

$Z = (x+1)(x-2) + 5(x+1)$	$A = (x-3)(2x+1) + 7(2x+1)$	$B = (x+1)(x+2) - 5(x+2)$
$Z = (x+1)[(x-2) + 5]$	$A = (2x+1)[(x-3) + 7]$	$B = (x+2)[(x+1) - 5]$
$Z = (x+1)(x+3)$	$A = (2x+1)(x+4)$	$B = (x+2)(x-4)$
$C = (3-x)(4x+1) - 8(4x+1)$	$D = 5(1+2x) - (x+1)(1+2x)$	$E = -6(3x-2) - (3x-2)(x-4)$
$C = (4x+1)[(3-x) - 8]$	$D = (1+2x)[5 - (x+1)]$	$E = (3x-2)[-6 - (x-4)]$
$C = (4x+1)(-x-5)$	$D = (1+2x)(4-x)$	$E = (3x-2)[-6 - x + 4]$
		$E = (3x-2)(-2-x)$

$Z = (x+1)(x-2) + (x+1)(x+7)$	$A = (x+1)(3-x) + (x+1)(2+5x)$	$B = (x+2)(x+1) + (x+2)(7x-5)$
$Z = (x+1)[(x-2) + (x+7)]$	$A = (x+1)[(3-x) + (2+5x)]$	$B = (x+2)[(x+1) + (7x-5)]$
$Z = (x+1)(2x+5)$	$A = (x+1)[3-x+2+5x]$	$B = (x+2)[x+1+7x-5]$
	$A = (x+1)(4x+5)$	$B = (x+2)(8x-4)$
$C = (x+3)(3-2x) - (x+3)(5+x)$	$D = (2x+1)(x-5) - (3x+1)(2x+1)$	$E = (x-6)(2-x) - (2-x)(3+4x)$
$C = (x+3)[(3-2x) - (5+x)]$	$D = (2x+1)[(x-5) - (3x+1)]$	$E = (2-x)[(x-6) - (3+4x)]$
$C = (x+3)[3-2x-5-x]$	$D = (2x+1)[x-5-3x-1]$	$E = (2-x)[x-6-3-4x]$
$C = (x+3)(-3x-2)$	$D = (2x+1)(-2x-6)$	$E = (2-x)(-3x-9)$

$Z = (x+1)^2 + (x+1)(x+7)$	$A = (x+1)^2 + (x+1)(3x+1)$	$B = (2x+1)^2 + (2x+1)(x+3)$
$Z = (x+1)[(x+1) + (x+7)]$	$A = (x+1)[(x+1) + (3x+1)]$	$B = (2x+1)[(2x+1) + (x+3)]$
$Z = (x+1)(2x+8)$	$A = (x+1)[x+1+3x+1]$	$B = (2x+1)[2x+1+x+3]$
	$A = (x+1)(4x+2)$	$B = (2x+1)(3x+4)$
$C = (x-3)^2 - (x-3)(4x+1)$	$D = (x+1)(2x-5) + (2x-5)^2$	$E = (3x-4)(2-x) - (3x-4)^2$
$C = (x-3)[(x-3) - (4x+1)]$	$D = (2x-5)[(x+1) + (2x-5)]$	$E = (3x-4)[(2-x) - (3x-4)]$
$C = (x-3)[x-3-4x-1]$	$D = (2x-5)[x+1+2x-5]$	$E = (3x-4)[2-x-3x+4]$
$C = (x-3)(-3x-4)$	$D = (2x-5)(3x-4)$	$E = (3x-4)(-4x+6)$

## EXERCICE 2

$Z = (x-1)(x-2) + (2x-2)(x+7)$	$A = (x+1)(x+2) + (2x+2)(3x-4)$	$B = (x-1)(2x+1) + (6x+3)(3-x)$
$Z = (x-1)(x-2) + 2(x-1)(x+7)$	$A = (x+1)(x+2) + 2(x+1)(3x-4)$	$B = (x-1)(2x+1) + 6(2x+1)(3-x)$
$Z = (x-1)[(x-2) + 2(x+7)]$	$A = (x+1)[(x+2) + 2(3x-4)]$	$B = (2x+1)[(x-1) + 6(3-x)]$
$Z = (x-1)(x-2+2x+14)$	$A = (x+1)[x+2+6x-8]$	$B = (2x+1)[x-1+18-6x]$
$Z = (x-1)(3x+12)$	$A = (x+1)(7x-6)$	$B = (2x+1)(17-5x)$
$C = (10x-5)(x+2) + (1-x)(2x-1)$	$D = (4x+4)(1-2x) + (x+1)^2$	$E = (2x+1)^2 - (x+3)(10x+5)$
$C = 5(2x-1)(x+2) + (1-x)(2x-1)$	$D = 4(x+1)(1-2x) + (x+1)^2$	$E = (2x+1)^2 - (x+3) \times 5(2x+1)$
$C = (2x-1)[5(x+2) + (1-x)]$	$D = (x+1)[4(1-2x) + (x+1)]$	$E = (2x+1)[(2x+1) - (x+3) \times 5]$
$C = (2x-1)[5x+10+1-x]$	$D = (x+1)[4-8x+x+1]$	$E = (2x+1)[2x+1-5x-15]$
$C = (2x-1)(4x+11)$	$D = (x+1)(5-7x)$	$E = (2x+1)(-3x-14)$