

CORRIGE – LA MERCI - MONTPELLIER

EXERCICE 2A.1

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

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

b. Même consigne que l'exercice précédent :

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

c. Même consigne que l'exercice précédent :

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

FACTORISATIONS

EXERCICE 2A.2

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

$Z = (x-1)(x-2) + \underline{(2x-2)}(x+7)$	$A = (x+1)(x+2) + \underline{(2x+2)}(3x-4)$	$B = (x-1)(2x+1) + \underline{(6x+3)}(3-x)$
$Z = \underline{(x-1)}(x-2) + 2\underline{(x-1)}(x+7)$	$A = \underline{(x+1)}(x+2) + 2\underline{(x+1)}(3x-4)$	$B = (x-1)\underline{(2x+1)} + 3\underline{(2x+1)}(3-x)$
$Z = (x+1)[\underline{(x-2)} + 2\underline{(x+7)}]$	$A = (x+1)[\underline{(x+2)} + 2 \times \underline{(3x-4)}]$	$B = (2x+1)[\underline{(x-1)} + 3 \times \underline{(3-x)}]$
$Z = (x+1)(x-2 + \underline{2x+14})$	$A = (x+1)[x+2 + \underline{6x-8}]$	$B = (2x+1)[x-1 + \underline{9-3x}]$
$Z = (x+1)\underline{(3x+12)}$	$A = (x+1)(7x-6)$	$B = (2x+1)(8-2x)$
		$B = 2(2x+1)(4-x)$
$C = \underline{(10x-5)}(x+2) + (1-x)(2x-1)$	$D = \underline{(4x+4)}(1-2x) + (x+1)^2$	$E = (2x+1)^2 - (x+3)\underline{(10x+5)}$
$C = 5\underline{(2x-1)}(x+2) + (1-x)\underline{(2x-1)}$	$D = 4\underline{(x+1)}(1-2x) + \underline{(x+1)}^2$	$E = \underline{(2x+1)}^2 - (x+3) \times 5\underline{(2x+1)}$
$C = (2x-1)[\underline{5 \times (x+2)} + \underline{(1-x)}]$	$D = (x+1)[\underline{4 \times (1-2x)} + \underline{(x+1)}]$	$E = (2x+1)[\underline{(2x+1)} - \underline{(x+3)} \times 5]$
$C = (2x-1)[\underline{5x+10} + \underline{1-x}]$	$D = (x+1)[\underline{4-8x} + \underline{x+1}]$	$E = (2x+1)[2x+1 - 5x - 15]$
$C = (2x-1)(4x+11)$	$D = (x+1)(5-7x)$	$E = (2x+1)(-3x-14)$
		$E = -(2x+1)(3x+14)$