

## La Providence - Montpellier

## CORRIGE - M. QUET

EXERCICE 1 : Développer :

$(a + b)$	$(c + d)$	=	$ac$	+	$ad$	+	$bc$	+	$bd$
$(x + Y)$	$(z + t)$	=	$xz$	+	$xt$	+	$Yz$	+	$Yt$
$(3 + 2)$	$(a + b)$	=	$3a$	+	$3b$	+	$2a$	+	$2b$
$(x + 3)$	$(t + v)$	=	$xt$	+	$xv$	+	$3t$	+	$3v$
$(a + c)$	$(b + d)$	=	$ab$	+	$ad$	+	$cb$	+	$cd$
$(c + d)$	$(5 + 3)$	=	$5c$	+	$3c$	+	$5d$	+	$3d$
$(x^2 + x)$	$(y^2 + y)$	=	$x^2y^2$	+	$x^2y$	+	$xy^2$	+	$xy$
$(a + x)$	$(b + y)$	=	$ab$	+	$ay$	+	$xb$	+	$xy$
$(c + a)$	$(d + b)$	=	$cd$	+	$cb$	+	$ad$	+	$ab$

EXERCICE 2 - Développer :

$(x + t)(y + z)$	=	$xy + xz + ty + tz$
$(a + x)(b + y)$	=	$ab + ay + xb + xy$
$(3 + x)(2 + y)$	=	$6 + 3y + 2x + xy$
$(x + 6)(y + 4)$	=	$xy + 4x + 6y + 24$
$(a + 2)(b + 7)$	=	$ab + 7a + 2b + 14$
$(b + a)(d + c)$	=	$bd + bc + ad + ac$
$(c + d)(a + b)$	=	$ca + cb + da + db$
$(1 + x)(y + 1)$	=	$y + 1 + xy + x$
$(x + 2)(x + 3)$	=	$x^2 + 3x + 2x + 6$
$(2x + 1)(x + 5)$	=	$2x^2 + 10x + x + 5$

EXERCICE 3 - Développer :

$(x + 3)(x - 2)$	=	$x^2 - 2x + 3x - 6$
$(x - 4)(x + 1)$	=	$x^2 + x - 4x - 4$
$(x^2 + 1)(x + 2)$	=	$x^3 + 2x^2 + x + 2$
$(5 - x)(-3 - x)$	=	$-15 - 5x + 3x + x^2$
$(2a + 4)(3a - 5)$	=	$6a^2 - 10a + 12a - 20$
$(x^2 - 3)(-2x + 4)$	=	$-2x^3 + 4x^2 + 6x - 12$
$(3x - 7)(4x^2 - 1)$	=	$12x^3 - 3x - 28x^2 + 7$
$(1 + x)(-x + 1)$	=	$-x + 1 - x^2 + x$
$(3x^2 - 5)(x + 2)$	=	$3x^3 + 6x^2 - 5x - 10$
$(-3 + x)(6 - 2x^2)$	=	$-18 + 6x^2 + 6x - 2x^3$

EXERCICE 4 : Développer puis réduire :

$A = (x + 3)(x - 2)$	$B = (x - 4)(x + 6)$
$A = x^2 - 2x + 3x - 6$	$B = x^2 + 6x - 4x - 24$
$A = x^2 + x - 6$	$B = x^2 - 2x - 24$
$C = (a - 5)(2a - 7)$	$D = (4 - x^2)(x + 3)$
$C = 2a^2 - 7a - 10a + 35$	$D = 4x + 12 - x^3 - 3x^2$
$C = 2a^2 - 17a + 35$	$D = -x^3 - 3x^2 + 4x + 12$
$E = (3x - 2)(5x + 1)$	$F = (4 - 2x)(-1 - 3x)$
$E = 15x^2 + 3x - 10x - 2$	$F = -4 - 12x + 2x + 6x^2$
$E = 15x^2 - 7x - 2$	$F = 6x^2 - 10x - 4$
$G = (x + 3)(x + 3)$	$H = (2 - x)(2 - x)$
$G = x^2 + 3x + 3x + 9$	$H = 4 - 2x - 2x + x^2$
$G = x^2 + 6x + 9$	$H = 4 - 4x + x^2$
$I = (a + b)(a - b)$	$J = (x + 6)^2$
$I = a^2 - ab + ba - b^2$	$J = x^2 + 6x + 6x + 36$
$I = a^2 - b^2$	$J = x^2 + 12x + 36$

EXERCICE 5 : Développer puis réduire :

$A = (4x - 1)(6 - 3x)$
$A = 24x - 12x^2 - 6 + 3x$
$A = -12x^2 + 27x - 6$
$B = (x - 2)(x + 7) + x^2$
$B = x^2 + 7x - 2x - 14 + x^2$
$B = 2x^2 + 5x - 14$
$C = 2x^2 + (x - 4)(3 - x)$
$C = 2x^2 + 3x - x^2 - 12 + 4x$
$C = x^2 + 7x - 12$
$D = x(x - 1) - 3(x + 1)$
$D = x^2 - x - 3x - 3$
$D = x^2 - 4x - 3$
$E = (x + 2)(-x - 3) + 3x^2$
$E = -x^2 - 3x - 2x - 6 + 3x^2$
$E = 2x^2 - 5x - 6$