Exercice 58 p.46

a. On peut exprimer l'aire du rectangle $ABCD$ des quatre façons suivantes :

- $\mathscr{A}_1 = AB \times AD = (x+3)(x+2)$
- $\mathscr{A}_2 = \mathscr{A}_{ARTD} + \mathscr{A}_{RBCT} = AR \times RT + RB \times BC = x(x+2) + 3(x+2)$
- $\mathscr{A}_3 = \mathscr{A}_{ABSU} + \mathscr{A}_{USCD} = AB \times BS + US \times SC = x(x+3) + 2(x+3)$
- $\mathscr{A}_4 = \mathscr{A}_{ARMU} + \mathscr{A}_{RBSM} + \mathscr{A}_{MSCT} + \mathscr{A}_{UMTD} = x^2 + 3x + 2 \times 3 + 2x$

b.

$\mathscr{A}_1 = x \times x + x \times 2 + 3 \times x + 3 \times 2$ (double distributivité)
$\mathscr{A}_1 = x^2 + 2x + 3x + 6$
$\mathscr{A}_1 = x^2 + 5x + 6$

$\mathscr{A}_2 = x \times x + x \times 2 + 3 \times x + 3 \times 2$
$\mathscr{A}_2 = x^2 + 2x + 3x + 6$
$\mathscr{A}_2 = x^2 + 5x + 6$

$\mathscr{A}_3 = x \times x + x \times 3 + 2 \times x + 2 \times 3$
$\mathscr{A}_3 = x^2 + 3x + 2x + 6$
$\mathscr{A}_3 = x^2 + 5x + 6$

$\mathscr{A}_4 = x^2 + 3x + 6 + 2x$
$\mathscr{A}_4 = x^2 + 5x + 6$

Les quatre expressions ont bien la même forme développée réduite.

*Dans les exercices à compléter, les réponses sont en **gras**.*

Exercice 59 p.46

a. $(x+5)(x+3) = \boldsymbol{x^2} + \mathbf{3}x + \mathbf{5}x + \mathbf{15}$

b. $(3x+2)(x+4) = 3\boldsymbol{x^2} + \mathbf{12}x + \mathbf{2}x + \mathbf{8}$

c. $(x+3)(x-2) = \boldsymbol{x^2} - \mathbf{2}x + \mathbf{3}x - \mathbf{6}$

d. $(x-4)(x-1) = \boldsymbol{x^2} - \mathbf{1}x - \mathbf{4}x + \mathbf{4}$

Exercice 60 p.46

$A = (x+4)(x+5)$
$A = x^2 + 5x + 4x + 20$
$A = x^2 + 9x + 20$

$B = (x-3)(x+8)$
$B = x^2 + 8x - 3x - 24$
$B = x^2 + 5x - 24$

Exercice 61 p.46

$C = (2y+1)(y+3)$
$C = 2y^2 + 6y + 1y + 3$
$C = 2y^2 + 7y + 3$

$D = (y-5)(y-2)$
$D = y^2 - 2y - 5y + 10$
$D = y^2 - 7y + 10$