Fiche : Factorisation : Niveau B

B1	$(7x + 3)(3x - 2) + 3x - 2$
B2	$(x + 5)^2 - 25$
B3	$(6x - 1)(7x - 3) - (7x - 3)(x + 9)$
B4	$4(x - 5) - (x - 5)^2$
B5	$(x + 8)(x + 7) - (2x + 5)(x + 8)$

B6	$(2x + 3)^2 - 16$
B7	$(3x + 1)^2 + (2x + 7)(3x + 1)$
B8	$8x - 5 - (8x + 1)(8x - 5)$
B9	$5(3x - 4) - (x - 2)(3x - 4)$
B10	$x^2 + 10x + 25 + (x + 5)(2x + 1)$

B11	$(x + 3)^2 - (x + 3)(2x + 1)$
B12	$100 - (5x - 4)^2$
B13	$(3x - 7)^2 - 3x + 7$
B14	$(8x + 1)(x - 5) - (x - 5)(2x + 5)$
B15	$-3(x + 9) - (x + 9)(2x + 3)$

Fiche : Factorisation : Niveau B : Réponses

B1	$(7x + 3)(3x – 2) + 3x – 2 = (7x + 3)(\underline{3x – 2}) + 1\times(\underline{3x – 2})$ $= (3x – 2)[7x + 3 + 1] = (3x – 2)(7x + 4)$
B2	$(x + 5)^2 – 25=(x + 5)^2 – 5^2 =[x+5-5][x+5+5]= x(x + 10)$
B3	$(6x – 1)(7x – 3) – (7x – 3)(x + 9) = (6x–1)(\underline{7x–3}) – (\underline{7x–3})(x+9)$ $=(7x – 3)[6x-1– (x+9)]= (7x – 3)[6x-1–x-9)] = (7x – 3)(5x – 10)$
B4	$4(x – 5) – (x – 5)^2 = 4(\underline{x - 5}) - (x - 5)(\underline{x - 5}) = (x - 5) [4 – (x-5)]$ $= (x – 5)[4 – x + 5] = (x – 5)(- x + 9)$
B5	$(x + 8)(x + 7) – (2x +5)(x + 8)= (\underline{x + 8})(x + 7) – (2x +5)(\underline{x + 8})$ $= (x+8)[x+7 – (2x+5)] = (x + 8)[x + 7 – 2x - 5] = (x + 8)(-x + 2)$

B6	$(2x + 3)^2 – 16=(2x + 3)^2 – 4^2=[2x+3-4][2x+3+4]=(2x - 1)(2x + 7)$
B7	$(3x +1)^2+(2x + 7)(3x + 1)=(3x +1)(\underline{3x + 1}) + (2x + 7)(\underline{3x + 1})=$ $(3x + 1)[3x + 1 + 2x + 7] = (3x + 1)(5x + 8)$
B8	$8x – 5 – (8x + 1)(8x – 5)= 1\times(\underline{8x – 5}) – (8x + 1)(\underline{8x – 5})$ $= (8x – 5)[1 – (8x + 1)] = (8x – 5)[1- 8x - 1]= (8x - 5)(-8x)$
B9	$5(3x – 4) – (x – 2)(3x – 4) = 5(\underline{3x – 4}) – (x – 2)(\underline{3x – 4})$ $= (3x – 4)[5 – (x – 2)] = (3x – 4)(5 – x + 2) = (3x - 4)(- x + 7)$
B10	$x^2+10x+25 + (x+5)(2x+1) = x^2 + 2\times x\times 5 + 5^2 + (x + 5)(2x + 1)$ $= (x + 5)^2 + (x + 5)(2x + 1) = (x + 5)(\underline{x + 5}) + (\underline{x + 5})(2x + 1)$ $= (x + 5)[x + 5 + 2x + 1] = (x + 5)(3x + 6)$

B11	$(x + 3)^2 – (x + 3)(2x + 1) = (\underline{x + 3})(x + 3) – (\underline{x + 3})(2x + 1)$ $= (x + 3)[x+3 - (2x+1)] = (x + 3)[x + 3 – 2x - 1]= (x + 3)(-x + 2)$
B12	$100 – (5x – 4)^2= 10^2 - (5x – 4)(5x – 4) = [10 - (5x-4)][10 + (5x-4)]$ $= (10 – 5x + 4)(10 + 5x - 4) = (-5x + 14)(5x + 6)$
B13	$(3x – 7)^2 - 3x + 7 = (3x – 7)(\underline{3x – 7}) – 1 \times (\underline{3x – 7}) =$ $(3x – 7)[3x – 7 – 1] = (3x – 7)(3x – 8)$
B14	$(8x + 1)(\underline{x – 5}) – (\underline{x – 5})(2x + 5) = (x - 5)[8x + 1 - (2x + 5)]$ $= (x – 5)[8x + 1 – 2x - 5]=(x – 5)(6x – 4)$
B15	$-3(x + 9) – (x + 9)(2x + 3) = -3(\underline{x + 9}) – (\underline{x + 9})(2x + 3) =$ $= (x + 9)[-3 – (2x + 3)] = (x + 9)(-3 - 2x - 3)=(x + 9)(-2x - 6)$