IDENTITES REMARQUABLES : NIVEAU A : DEVELOPPEMENTS

A1	$(x + 2)^2$
A2	$(10x + 5)^2$
A3	$(x - 5)^2$
A4	$(3x - 7)^2$
A5	$(3x + 2)(3x - 2)$

A6	$(3x + 2)^2$
A7	$(2x - 1)^2$
A8	$(x - 9)(x + 9)$
A9	$(3 + 2x)^2$
A10	$(9x - 4)(9x + 4)$

A11	$(4x + 1)^2$
A12	$(3x - 5)^2$
A13	$(5x - 6)(5x + 6)$
A14	$(x - 2)^2$
A15	$(7x + 2)^2$

A16	$(2x - 5)^2$
A17	$(4x + 7)(4x - 7)$
A18	$(2x + 9)^2$
A19	$(3x - 11)^2$
A20	$(7 - 2x)(7 + 2x)$

REPONSES : IDENTITES REMARQUABLES : NIVEAU A : DEVELOPPEMENTS

A1	$(x + 2)^2 = x^2 + 4x + 4$
A2	$(10x + 5)^2 = 100x^2 + 100x + 25$
A3	$(x - 5)^2 = x^2 - 10x + 25$
A4	$(3x - 7)^2 = 9x^2 - 42x + 49$
A5	$(3x + 2)(3x - 2) = 9x^2 - 4$

A6	$(3x + 2)^2 = 9x^2 + 12x + 4$
A7	$(2x - 1)^2 = 4x^2 - 4x + 1$
A8	$(x - 9)(x + 9) = x^2 - 81$
A9	$(3 + 2x)^2 = 9 + 12x + 4x^2$
A10	$(9x - 4)(9x + 4) = 81x^2 - 16$

A11	$(4x + 1)^2 = 16x^2 + 8x + 1$
A12	$(3x - 5)^2 = 9x^2 - 30x + 25$
A13	$(5x - 6)(5x + 6) = 25x^2 - 36$
A14	$(x - 2)^2 = x^2 - 4x + 4$
A15	$(7x + 2)^2 = 49x^2 + 28x + 4$

A16	$(2x - 5)^2 = 4x^2 - 20x + 25$
A17	$(4x + 7)(4x - 7) = 16x^2 - 49$
A18	$(2x + 9)^2 = 4x^2 + 36x + 81$
A19	$(3x - 11)^2 = 9x^2 - 66x + 121$
A20	$(7 - 2x)(7 + 2x) = 49 - 4x^2$

IDENTITES REMARQUABLES : NIVEAU B : DEVELOPPEMENTS

B1	$2(3x - 4)^2$
B2	$- (x + 7)^2$
B3	$- 10 (2x - 9)(2x + 9)$
B4	$7(3x - 1)^2$
B5	$(x + 3)^2 + (2x + 7)^2$

B6	$-2 (3x - 1)^2$
B7	$- (2x - 1)^2$
B8	$- (x + 11)^2$
B9	$7 (3x + 4)(3x - 4)$
B10	$- 4 (5x + 2)^2$

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

B16	$(2x - 11)^2 + (2x - 3)(2x + 3)$
B17	$- (2x - 7)^2$
B18	$- 3 (10x + 3)^2$
B19	$5 (10x - 1)(10x + 1)$
B20	$- 6 (7 + 3x)^2$

REPONSES : IDENTITES REMARQUABLES : NIVEAU B : DEVELOPPEMENTS

B1	$2(3x - 4)^2 = 2 (9x^2 - 24x + 16) = 18x^2 - 48x + 32$
B2	$- (x + 7)^2 = - (x^2 + 14x + 49) = - x^2 - 14x - 49$
B3	$- 10 (2x - 9)(2x + 9) = - 10 (4x^2 - 81) = - 40x^2 + 810$
B4	$7(3x - 1)^2 = 7 (9x^2 - 6x + 1) = 63x^2 - 42x + 7$
B5	$(x + 3)^2 + (2x+7)^2 = (x^2+6x+9)+(4x^2+28x+49) = 5x^2 + 34x + 58$

B6	$-2 (3x - 1)^2 = - 2 (9x^2 - 6x + 1) = -18x^2 + 12x - 2$
B7	$- (2x - 1)^2 = - (4x^2 - 4x + 1) = - 4x^2 + 4x - 1$
B8	$- (x + 11)^2 = - (x^2 + 22x + 1) = - x^2 - 22x - 1$
B9	$7 (3x + 4)(3x - 4) = 7 (9x^2 - 16) = 63x^2 - 112$
B10	$- 4 (5x + 2)^2 = - 4 (25x^2 + 20x + 4) = - 100x^2 - 80x - 16$

B11	$(2x - 7)^2 + (x + 7)(x - 7) = 4x^2 - 28x + 49 + x^2 - 49 = 5x^2 - 28x$
B12	$- (3x - 8) (3x + 8) = - (9x^2 - 64) = - 9x^2 + 64$
B13	$- 2 (7 - 4x)^2 = - 2 (49 - 56x + 16x^2) = -98 + 112x - 32x^2$
B14	$- 4 (3 + 2x)^2 = - 4 (9 + 12x + 4x^2) = -36 - 48x - 16x^2$
B15	$(2x + 3)^2 + (x - 1)^2 = 4x^2 +12x + 9 + x^2 - 2x + 1 = 5x^2+10x+10$

B16	$(2x - 11)^2 + (2x - 3)(2x +3) = (4x^2-44x+121)+(4x^2-9) = 8x^2-44x+112$
B17	$- (2x - 7)^2 = - (4x^2 - 28x + 49) = - 4x^2 + 28x - 49$
B18	$- 3 (10x + 3)^2 = - 3 (100x^2 + 60x + 9) = -300x^2 - 180x - 27$
B19	$5 (10x - 1)(10x + 1) = 5 (100x^2 - 1) = 500x^2 - 5$
B20	$- 6 (7 + 3x)^2 = - 6 (49 + 42x + 9x^2) = - 294 - 252x - 54x^2$

IDENTITES REMARQUABLES : NIVEAU C : DEVELOPPEMENTS

C1	$(2x + 1)^2 - (3x - 2)(3x + 2)$
C2	$(2x + 3)^2 - (2x + 3)(x - 7)$
C3	$3(7x - 4)^2 - (x + 2)^2$
C4	$(7x - 2)(3x + 1) - 2(2x + 1)^2$
C5	$5(3x - 9)(3x + 9) - (3x + 4)^2$

C6	$(2x - 1)^2 - (2x + 3)(2x - 5)$
C7	$(3x + 1)^2 - 2(3x - 1)^2$
C8	$2(2 - 14x)^2 - (7x - 1)^2$
C9	$2x(x - 5) - (x + 1)^2$
C10	$(x + 3)^2 - (2x + 1)(2x - 1)$

C11	$5x^2 - (x + 3)(x - 3)$
C12	$(3x + 2)^2 - (x - 1)^2$
C13	$5(x - 1)(x + 2) - (x + 3)^2$
C14	$(4x - 3)^2 + 7(x - 2)(x - 5)$
C15	$- 3(x - 6)^2 - 7(3x - 4)(3x + 4)$

REPONSES : IDENTITES REMARQUABLES : NIVEAU C : DEVELOPPEMENTS

C1	$(2x + 1)^2 - (3x - 2)(3x + 2) = 4x^2+4x+1 - [9x^2-4]$ $= 4x^2+4x+1 - 9x^2+4 = -5x^2+4x+5$
C2	$(2x + 3)^2 - (2x + 3)(x - 7) = 4x^2+12x+9 - [2x^2-14x+3x-21]$ $= 4x^2+12x+9 - 2x^2+14x-3x+21 = 2x^2+23x+30$
C3	$3(7x - 4)^2 - (x + 2)^2 = 3 (49x^2-56x+16) - [x^2+4x+4]$ $= 147x^2-168x+48 - x^2-4x-4 = 146x^2-172x+44$
C4	$(7x - 2)(3x + 1) - 2(2x + 1)^2 = 21x^2+7x-6x-2 - 2[4x^2+4x+1]$ $= 21x^2+x-2 - 8x^2-8x-2 = 13x^2 - 7x - 4$
C5	$5(3x - 9)(3x + 9) - (3x + 4)^2 = 5[9x^2 - 81] - [9x^2 +24x + 16]$ $= 45x^2 - 405 - 9x^2-24x-16 = 36x^2 - 24x - 421$

C6	$(2x - 1)^2 - (2x + 3)(2x - 5) = 4x^2-4x+1 - [4x^2-10x+6x-15]$ $= 4x^2-4x+1 - 4x^2+10x-6x+15 = 16$
C7	$(3x + 1)^2 - 2(3x - 1)^2 = 9x^2+6x+1 - 2[9x^2-6x+1]$ $= 9x^2+6x+1 - 18x^2+12x-2 = -9x^2 + 18x - 1$
C8	$2(2 - 14x)^2 - (7x - 1)^2 = 2(4-56x+196x^2) - [49x^2-14x+1]$ $= 8-112x+392x^2 - 49x^2+14x-1 = 343x^2-98x+7$
C9	$2x(x - 5) - (x + 1)^2 = 2x^2-10x - [x^2+2x+1]$ $= 2x^2-10x - x^2-2x-1 = x^2-12x-1$
C10	$(x + 3)^2 - (2x + 1)(2x - 1) = x^2+6x+9 - [4x^2-1]$ $= x^2+6x+9 - 4x^2+1 = -3x^2+6x+10$

C11	$5x^2 - (x + 3)(x - 3) = 5x^2 - [x^2-9] = 5x^2 - x^2+9 = 4x^2 - 9$
C12	$(3x + 2)^2 - (x - 1)^2 = 9x^2+12x+4 - [x^2-2x+1]$ $= 9x^2+12x+4 - x^2+2x-1 = 8x^2+14x+3$
C13	$5(x - 1)(x + 2) - (x + 3)^2 = 5(x^2+2x-x-2) - [x^2+6x+9]$ $= 5x^2+10x-5x-10 - x^2-6x-9 = 4x^2-x-19$
C14	$(4x - 3)^2 + 7(x - 2)(x - 5) = 16x^2-24x+9 + 7[x^2-5x-2x+10]$ $= 16x^2-24x+9 + 7x^2-35x-14x+70 = 23x^2-73x+79$
C15	$- 3(x - 6)^2 - 7(3x - 4)(3x + 4) = -3[x^2-12x+36] - 7[9x^2-16]$ $= -3x^2+36x-108 - 63x^2+112 = -66x^2+36x+4$

Fiche : Factorisation : Niveau A

A1	$64x^2 - 49$
A2	$(2x+1)(3x+5) + (4x+2)(2x+1)$
A3	$16x^2 - 40x + 25$
A4	$(x-2)(x+3) + (x-2)(4x-1)$
A5	$x^2 + 4x + 4$

A6	$(5x-3)(2x-5) - x(5x-3)$
A7	$t^2 + 12t + 36$
A8	$(x+1)(x+3) - 5(x+3)$
A9	$y^2 - 81$
A10	$(x+4)(x-2) + (3x+1)(x+4)$

A11	$9x^2 - 24x + 16$
A12	$(x-3)(2x+1) + (2x+1)(3x-2)$
A13	$x^2 + 14x + 49$
A14	$(3x+2)(7x-1) - 10(7x-1)$
A15	$100t^2 - 121$

A16	$(x+2)(x+1) - 2x(x+1)$
A17	$9x^2 - 6x + 1$
A18	$2(6x-7) + (6x-7)(x+3)$
A19	$49x^2 - 42x + 9$
A20	$64x^2 - 81$

Fiche : Factorisation : Niveau A : réponses

A1	$64x^2 - 49 = (8x)^2 - 7^2 = (8x - 7)(8x + 7)$
A2	$(\underline{2x+1})(3x+5) + (4x+2)(\underline{2x+1}) = (2x+1)[3x+5+4x+2]$ $= (2x + 1)(7x + 7)$
A3	$16x^2 - 40x + 25 = (4x)^2 - 2\times4x\times5 + 5^2 = (4x - 5)^2$
A4	$(\underline{x-2})(x+3) + (\underline{x-2})(4x-1) = (x-2)[x+3+4x-1] = (x-2)(5x+2)$
A5	$x^2 + 4x + 4 = x^2 + 2\times x\times2 + 2^2 = (x + 2)^2$

A6	$(\underline{5x-3})(2x-5) - x(\underline{5x-3}) = (5x - 3)[2x - 5 - x]$ $= (5x - 3)(x - 5)$
A7	$t^2 + 12t + 36 = t^2 + 2\times t\times6 + 6^2 = (t + 6)^2$
A8	$(x+1)(\underline{x+3}) - 5(\underline{x+3}) = (x+3)[x+1-5] = (x+3)(x-4)$
A9	$y^2 - 81 = y^2 - 9^2 = (y - 9)(y + 9)$
A10	$(\underline{x+4})(x-2)+(3x+1)(\underline{x+4}) = (x+4)[x-2+3x+1] = (x+4)(4x-1)$

A11	$9x^2 - 24x + 16 = (3x)^2 - 2\times3x\times4 + 4^2 = (3x - 4)^2$
A12	$(x-3)(\underline{2x+1}) + (\underline{2x+1})(3x-2) =$ $(2x+1)[x-3 + 3x-2] = (2x+1)(4x-5)$
A13	$x^2 + 14x + 49 = x^2 + 2\times x\times7 + 7^2 = (x + 7)^2$
A14	$(3x+2)(\underline{7x-1}) - 10(\underline{7x-1}) = (7x-1)[3x+2-10] = (7x-1)(3x-8)$
A15	$100t^2 - 121 = (10t)^2 - 11^2 = (10t - 11)(10t + 11)$

A16	$(x+2)(\underline{x+1}) - 2x(\underline{x+1}) = (x+1)[x+2-2x] = (x+1)(-x+2)$
A17	$9x^2 - 6x + 1 = (3x)^2 - 2\times3x\times1 + 1^2 = (3x - 1)^2$
A18	$2(\underline{6x-7}) + (\underline{6x-7})(x+3) = (6x-7)[2+x+3] = (6x-7)(x+5)$
A19	$49x^2 - 42x + 9 = (7x)^2 - 2\times7x\times3 + 3^2 = (7x - 3)^2$
A20	$64x^2 - 81 = (8x)^2 - 9^2 = (8x - 9)(8x + 9)$

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	$x^2+10x+25 + (x+5)(2x+1) = x^2 + 2\times x\times 5 + 5^2 + (x + 5)(2x + 1)$ $= (x + 5)^2 + (x + 5)(2x + 1) = (x + 5)(\underline{x + 5}) + (\underline{x + 5})(2x + 1)$ $= (x + 5)[x + 5 + 2x + 1] = (x + 5)(3x + 6)$

Guesmi.B

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	$-3(x + 9) - (x + 9)(2x + 3) = -3(\underline{x + 9}) - (\underline{x + 9})(2x + 3) =$ $= (x + 9)[-3 - (2x + 3)] = (x + 9)(-3 - 2x - 3)=(x + 9)(-2x - 6)$

Fiche : Factorisation : Niveau C

C1	$9x^2 - 16 + (3x + 4)(3x - 2)$
C2	$(4x - 1)^2 - (x - 5)^2$
C3	$(7x - 5)(3x + 2) - 6(3x + 2)(x + 3)$
C4	$(2x + 3)(2x - 1) + 4x^2+12x+9$
C5	$(6x - 1)^2 - (7x + 2)^2$

C6	$4x^2 - 9 + (2x + 3)(x - 5)$
C7	$(x + 4)(-2x + 1) - 3(x + 4)^2$
C8	$(x + 5)^2 - (x + 5)$
C9	$(2x - 3)^2 - 64x^2$
C10	$100x^2 + 100x + 25 - (10x + 5)(x + 7)$

C11	$(-2x + 3)^2 - (x - 9)^2$
C12	$(x + 3)^2 -25(3x + 4)^2$
C13	$x^2 - 9 - (2x + 5)(x - 3) + 5x - 15$
C14	$x^2 - 16 + (x + 4)^2$
C15	$(2x + 7)^2 + 10x +35$

Fiche : Factorisation : Réponses : Niveau C

C1	$9x^2 - 16 + (3x + 4)(3x - 2) = (3x)^2-4^2 + (3x + 4)(3x - 2) =$ $(3x-4)(3x+4) + (3x+4)(3x-2) = (3x + 4)[3x-4 + 3x-2] = (3x+4)(6x-6)$
C2	$(4x - 1)^2 - (x - 5)^2 = [\ (4x-1) - (x-5)\ ][\ (4x-1) + (x-5)\ ]$ $= (4x - 1 - x + 5)(4x - 1 + x - 5) = (3x + 4)(5x - 6)$
C3	$(7x - 5)(3x + 2) - 6(3x + 2)(x + 3) = (7x-5)\underline{(3x+2)} - 6\underline{(3x+2)}(x+3)$ $= (3x+2)[7x-5 - 6(x+3)] = (3x+2)(7x-5 -6x-18) = (3x + 2)(x - 23)$
C4	$(2x + 3)(2x - 1) + 4x^2+12x+9 = (2x+3)(2x-1) + (2x)^2 + 2\times2x\times3 + 3^2$ $= (2x + 3)(2x - 1) + (2x + 3)^2 = \underline{(2x + 3)}(2x - 1)+\underline{(2x + 3)}(2x + 3)$ $= (2x + 3)[2x - 1+ 2x + 3] = (2x + 3)(4x + 2)$
C5	$(6x - 1)^2 - (7x + 2)^2 = [6x-1 - (7x+2)]\ [6x-1 + 7x+2]$ $= (6x-1-7x-2)(6x-1+7x+2) = (\ -x - 3)(\ 13x + 1)$

C6	$4x^2 - 9 + (2x + 3)(x - 5) = (2x)^2 - 3^2 + (2x + 3)(x - 5) =$ $\underline{(2x+3)}(2x-3)+\underline{(2x+3)}(x - 5) = (2x+3)[2x-3+x-5] = (2x + 3)(3x - 8)$
C7	$(x + 4)(-2x + 1) - 3(x + 4)^2 = \underline{(x + 4)}(-2x + 1) - 3\underline{(x + 4)}(x + 4)$ $= (x + 4)[-2x + 1 - 3(x+4)] = (x + 4)(-2x+1-3x-12) = (x+4)(-5x-11)$
C8	$(x + 5)^2 - (x + 5) = \underline{(x + 5)}(x + 5) - 1\times\underline{(x + 5)}$ $= (x + 5)[x + 5 - 1] = (x + 5)(x + 4)$
C9	$(2x - 3)^2 - 64x^2 = (2x - 3)^2 - (8x)^2 = [2x-3 - 8x][2x-3 + 8x]$ $= (\ -6x - 3\ )(\ 10x - 3\ )$
C10	$100x^2+100x+25 - (10x+5)(x+7) = (10x)^2+2\times10x\times5+5^2 - (10x+5)(x+7)$ $= (10x+5)^2 - (10x + 5)(x + 7) = \underline{(10x+5)}(10x+5) - \underline{(10x+5)}(x+7)$ $= (10x + 5)[10x+5 - (x+7)] = (10x+5)(10x+5 -x-7] = (10x+5)(9x-2)$

C11	$(-2x + 3)^2 - (x - 9)^2 = [-2x+3 - (x-9)][\ -2x+3 + x-9]$ $= (-2x + 3 - x + 9)(-2x + 3 + x - 9) = (\ -3x + 12)(\ -x - 6)$
C12	$(x + 3)^2 - 25(3x + 4)^2 = (x+3)^2 - 5^2\times(3x+4)^2 = (x+3)^2 - [5\times(3x + 4)]^2$ $= (x+3)^2 - [15x + 20]^2 = [x+3 - (15x+20)][x+3 + 15x+20]$ $= (x + 3 - 15x - 20)(x + 3 + 15x + 20) = (\ -14x - 17)(16x + 23)$
C13	$x^2 - 9 - (2x + 5)(x - 3) + 5x - 15 = x^2-3^2 - (2x+5)(x-3) + 5\times(x-3)$ $= \underline{(x-3)}(x+3) - (2x+5)\underline{(x-3)} + 5\times\underline{(x-3)} = (x-3)[x+3 - (2x+5) + 5]$ $= (x - 3)(x+3 - 2x-5 + 5) = (x-3)(-x+3) = (x - 3)(-1)(x - 3) = -(x-3)^2$
C14	$x^2 - 16 + (x + 4)^2 = x^2 - 4^2 + (x+4)(x+4) = (x-4)\underline{(x+4)} + \underline{(x+4)}(x+4)$ $= (x + 4)[x - 4 + x + 4] = (x + 4)(2x) = 2x(x - 4)$
C15	$(2x + 7)^2 + 10x + 35 = (2x + 7)\underline{(2x + 7)} + 5\times\underline{(2x + 7)}$ $= (2x + 7)[2x + 7 + 5] = (2x + 7)(2x + 12)$