Corrigé de l'exercice 1

Factoriser les expressions suivantes.

$A = (-10\,x + 6)^2 + (-5\,x + 2)\,(-10\,x + 6)$

$A = (-10\,x + 6)\,(-10\,x + 6 - 5\,x + 2)$

$$\boxed{A = (-10\,x + 6)\,(-15\,x + 8)}$$

$B = 4 - (7\,x - 7)^2$

$B = 2^2 - (7\,x - 7)^2$

$B = (2 + 7\,x - 7)\,\big(2 - (7\,x - 7)\big)$

$B = (2 + 7\,x - 7)\,(2 - 7\,x + 7)$

$$\boxed{B = (7\,x - 5)\,(-7\,x + 9)}$$

$C = (-8\,x - 1)\,(x - 1) - (-8\,x - 1)$

$C = (-8\,x - 1)\,(x - 1) - (-8\,x - 1) \times 1$

$C = (-8\,x - 1)\,(x - 1 - 1)$

$$\boxed{C = (-8\,x - 1)\,(x - 2)}$$

$D = 36\,x^2 - 36$

$D = (6\,x)^2 - 6^2$

$$\boxed{D = (6\,x + 6)\,(6\,x - 6)}$$

$E = (9\,x - 8)\,(3\,x - 10) + (-9\,x - 2)\,(9\,x - 8)$

$E = (9\,x - 8)\,(3\,x - 10 - 9\,x - 2)$

$$\boxed{E = (9\,x - 8)\,(-6\,x - 12)}$$

$F = -(2\,x - 4)\,(6\,x + 2) + 4\,x^2 - 16$

$F = -(2\,x - 4)\,(6\,x + 2) + (2\,x)^2 - 4^2$

$F = -(2\,x - 4)\,(6\,x + 2) + (2\,x - 4)\,(2\,x + 4)$

$F = (2\,x - 4)\,\big(-(6\,x + 2) + 2\,x + 4\big)$

$F = (2\,x - 4)\,(-6\,x - 2 + 2\,x + 4)$

$$\boxed{F = (2\,x - 4)\,(-4\,x + 2)}$$

Corrigé de l'exercice 2

Factoriser les expressions suivantes.

$A = -(3\,x + 5) + (3\,x - 8)\,(3\,x + 5)$

$A = -(3\,x + 5) \times 1 + (3\,x - 8)\,(3\,x + 5)$

$A = (3\,x + 5)\,\big(-1 + 3\,x - 8\big)$

$$\boxed{A = (3\,x + 5)\,(3\,x - 9)}$$

$B = 100\,x^2 - 81 - (10\,x + 9)\,(2\,x - 10)$

$B = (10\,x)^2 - 9^2 - (10\,x + 9)\,(2\,x - 10)$

$B = (10\,x + 9)\,(10\,x - 9) - (10\,x + 9)\,(2\,x - 10)$

$B = (10\,x + 9)\,\big(10\,x - 9 - (2\,x - 10)\big)$

$B = (10\,x + 9)\,(10\,x - 9 - 2\,x + 10)$

$$\boxed{B = (10\,x + 9)\,(8\,x + 1)}$$

$C = 100\,x^2 - 36$

$C = (10\,x)^2 - 6^2$

$$\boxed{C = (10\,x - 6)\,(10\,x + 6)}$$

$D = 81 - (5\,x - 1)^2$

$D = 9^2 - (5\,x - 1)^2$

$D = (9 + 5\,x - 1)\,\big(9 - (5\,x - 1)\big)$

$D = (9 + 5\,x - 1)\,(9 - 5\,x + 1)$

$$\boxed{D = (5\,x + 8)\,(-5\,x + 10)}$$

$E = (8\,x - 3)\,(-7\,x - 7) + (-7\,x - 7)^2$

$E = (-7\,x - 7)\,(8\,x - 3 - 7\,x - 7)$

$$\boxed{E = (-7\,x - 7)\,(x - 10)}$$

$F = -(6\,x - 10)\,(-6\,x + 10) + (-6\,x + 10)\,(x - 10)$

$F = (-6\,x + 10)\,\big(-(6\,x - 10) + x - 10\big)$

$F = (-6\,x + 10)\,(-6\,x + 10 + x - 10)$

$$\boxed{F = (-6\,x + 10) \times (-5\,x)}$$

Corrigé de l'exercice 3

Factoriser les expressions suivantes.

$A = (-3\,x + 3)^2 - 1$

$A = (-3\,x + 3)^2 - 1^2$

$A = (-3\,x + 3 + 1)\,(-3\,x + 3 - 1)$

$A =$

$$\boxed{A = (-3\,x + 4)\,(-3\,x + 2)}$$

$B = (9\,x - 7)\,(-10\,x + 1) + (-10\,x + 10)\,(-10\,x + 1)$

$B = (-10\,x + 1)\,(9\,x - 7 - 10\,x + 10)$

$$\boxed{B = (-10\,x + 1)\,(-x + 3)}$$

$C = 4\,x^2 - 36 - (2\,x + 6)\,(-3\,x - 9)$

$C = (2\,x)^2 - 6^2 - (2\,x + 6)\,(-3\,x - 9)$

$C = (2\,x + 6)\,(2\,x - 6) - (2\,x + 6)\,(-3\,x - 9)$

$C = (2\,x + 6)\,\big(2\,x - 6 - (-3\,x - 9)\big)$

$C = (2\,x + 6)\,(2\,x - 6 + 3\,x + 9)$

$$\boxed{C = (2\,x + 6)\,(5\,x + 3)}$$

$D = 49\,x^2 - 36$

$D = (7\,x)^2 - 6^2$

$$\boxed{D = (7\,x + 6)\,(7\,x - 6)}$$

$E = (10\,x - 7) - (10\,x - 6)\,(10\,x - 7)$

$E = (10\,x - 7) \times 1 - (10\,x - 6)\,(10\,x - 7)$

$E = (10\,x - 7)\,\big(1 - (10\,x - 6)\big)$

$E = (10\,x - 7)\,(1 - 10\,x + 6)$

$$\boxed{E = (10\,x - 7)\,(-10\,x + 7)}$$

$F = (-2\,x - 10)^2 + (-2\,x - 10)\,(9\,x - 4)$

$F = (-2\,x - 10)\,(-2\,x - 10 + 9\,x - 4)$

$$\boxed{F = (-2\,x - 10)\,(7\,x - 14)}$$

Corrigé de l'exercice 4

Factoriser les expressions suivantes.

$A = x^2 - 36$

$A = x^2 - 6^2$

$$\boxed{A = (x - 6)\,(x + 6)}$$

$B = (-8\,x + 9)\,(-7\,x + 6) - (x - 6)\,(-8\,x + 9)$

$B = (-8\,x + 9)\,\big(-7\,x + 6 - (x - 6)\big)$

$B = (-8\,x + 9)\,(-7\,x + 6 - x + 6)$

$$\boxed{B = (-8\,x + 9)\,(-8\,x + 12)}$$

$C = -(7\,x + 4)\,(-5\,x + 9) + (-5\,x + 9)^2$

$C = (-5\,x + 9)\,\big(-(7\,x + 4) - 5\,x + 9\big)$

$C = (-5\,x + 9)\,(-7\,x - 4 - 5\,x + 9)$

$$\boxed{C = (-5\,x + 9)\,(-12\,x + 5)}$$

$D = 16 - (3\,x + 7)^2$

$D = 4^2 - (3\,x + 7)^2$

$D = (4 + 3\,x + 7)\,\big(4 - (3\,x + 7)\big)$

$D = (4 + 3\,x + 7)\,(4 - 3\,x - 7)$

$$\boxed{D = (3\,x + 11)\,(-3\,x - 3)}$$

$E = -(6\,x - 4)\,(6\,x + 6) - (6\,x + 6)$

$E = -(6\,x - 4)\,(6\,x + 6) - (6\,x + 6) \times 1$

$E = (6\,x + 6)\,\big(-(6\,x - 4) - 1\big)$

$E = (6\,x + 6)\,(-6\,x + 4 - 1)$

$$\boxed{E = (6\,x + 6)\,(-6\,x + 3)}$$

$F = 36\,x^2 - 1 + (8\,x + 1)\,(6\,x + 1)$

$F = (6\,x)^2 - 1^2 + (8\,x + 1)\,(6\,x + 1)$

$F = (6\,x + 1)\,(6\,x - 1) + (8\,x + 1)\,(6\,x + 1)$

$F = (6\,x + 1)\,(6\,x - 1 + 8\,x + 1)$

$$\boxed{F = (6\,x + 1) \times 14\,x}$$

Corrigé de l'exercice 5

Factoriser les expressions suivantes.

$A = -(-9x + 10)(4x - 3) - (4x - 3)$

$A = -(-9x + 10)(4x - 3) - (4x - 3) \times 1$

$A = (4x - 3)\big(-(-9x + 10) - 1\big)$

$A = (4x - 3)(9x - 10 - 1)$

$$\boxed{A = (4x - 3)(9x - 11)}$$

$B = 64x^2 - 36$

$B = (8x)^2 - 6^2$

$$\boxed{B = (8x + 6)(8x - 6)}$$

$C = -(-8x + 8)(6x + 2) + (-8x + 8)(9x - 6)$

$C = (-8x + 8)\big(-(6x + 2) + 9x - 6\big)$

$C = (-8x + 8)(-6x - 2 + 9x - 6)$

$$\boxed{C = (-8x + 8)(3x - 8)}$$

$D = (3x + 8)(-x + 4) + 9x^2 - 64$

$D = (3x + 8)(-x + 4) + (3x)^2 - 8^2$

$D = (3x + 8)(-x + 4) + (3x + 8)(3x - 8)$

$D = (3x + 8)(-x + 4 + 3x - 8)$

$$\boxed{D = (3x + 8)(2x - 4)}$$

$E = (-7x - 9)^2 - 49$

$E = (-7x - 9)^2 - 7^2$

$E = (-7x - 9 + 7)(-7x - 9 - 7)$

$E =$

$$\boxed{E = (-7x - 2)(-7x - 16)}$$

$F = (-9x + 1)^2 + (-9x + 1)(-5x + 7)$

$F = (-9x + 1)(-9x + 1 - 5x + 7)$

$$\boxed{F = (-9x + 1)(-14x + 8)}$$

Corrigé de l'exercice 6

Factoriser les expressions suivantes.

$A = (-3x + 6)(2x - 1) + (-5x + 1)(-3x + 6)$

$A = (-3x + 6)(2x - 1 - 5x + 1)$

$$\boxed{A = (-3x + 6) \times (-3x)}$$

$B = (-x - 5)^2 - 25$

$B = (-x - 5)^2 - 5^2$

$B = (-x - 5 + 5)(-x - 5 - 5)$

$B =$

$$\boxed{B = -x(-x - 10)}$$

$C = -(-10x + 4)(-10x - 5) + (-10x - 5)$

$C = -(-10x + 4)(-10x - 5) + (-10x - 5) \times 1$

$C = (-10x - 5)\big(-(-10x + 4) + 1\big)$

$C = (-10x - 5)(10x - 4 + 1)$

$$\boxed{C = (-10x - 5)(10x - 3)}$$

$D = 81x^2 - 36$

$D = (9x)^2 - 6^2$

$$\boxed{D = (9x - 6)(9x + 6)}$$

$E = (10x + 9)(-4x - 2) + (-4x - 2)^2$

$E = (-4x - 2)(10x + 9 - 4x - 2)$

$$\boxed{E = (-4x - 2)(6x + 7)}$$

$F = -(-10x - 4)(9x - 5) + 81x^2 - 25$

$F = -(-10x - 4)(9x - 5) + (9x)^2 - 5^2$

$F = -(-10x - 4)(9x - 5) + (9x - 5)(9x + 5)$

$F = (9x - 5)\big(-(-10x - 4) + 9x + 5\big)$

$F = (9x - 5)(10x + 4 + 9x + 5)$

$$\boxed{F = (9x - 5)(19x + 9)}$$