Corrigé de l'exercice 1

Factoriser les expressions suivantes.

$A = (-10x - 8)^2 - 16$

$A = (-10x - 8)^2 - 4^2$

$A = (-10x - 8 + 4)(-10x - 8 - 4)$

$A =$

$\boxed{A = (-10x - 4)(-10x - 12)}$

$B = (3x + 6)(-7x + 9) + (-7x + 9)^2$

$B = (-7x + 9)(3x + 6 - 7x + 9)$

$\boxed{B = (-7x + 9)(-4x + 15)}$

$C = -(4x - 1)(-8x - 7) + (4x - 1)$

$C = -(4x - 1)(-8x - 7) + (4x - 1) \times 1$

$C = (4x - 1)\big(-(-8x - 7) + 1\big)$

$C = (4x - 1)(8x + 7 + 1)$

$\boxed{C = (4x - 1)(8x + 8)}$

$D = -(-10x + 5)(8x + 7) + (-8x - 10)(-10x + 5)$

$D = (-10x + 5)\big(-(8x + 7) - 8x - 10\big)$

$D = (-10x + 5)(-8x - 7 - 8x - 10)$

$\boxed{D = (-10x + 5)(-16x - 17)}$

$E = 100x^2 - 100$

$E = (10x)^2 - 10^2$

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

$F = 25x^2 - 49 - (5x - 7)(6x + 1)$

$F = (5x)^2 - 7^2 - (5x - 7)(6x + 1)$

$F = (5x - 7)(5x + 7) - (5x - 7)(6x + 1)$

$F = (5x - 7)\big(5x + 7 - (6x + 1)\big)$

$F = (5x - 7)(5x + 7 - 6x - 1)$

$\boxed{F = (5x - 7)(-x + 6)}$

Corrigé de l'exercice 2

Factoriser les expressions suivantes.

$A = (-6x + 1)^2 - 25$

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

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

$A =$

$\boxed{A = (-6x + 6)(-6x - 4)}$

$B = (4x + 4)^2 + (7x - 7)(4x + 4)$

$B = (4x + 4)(4x + 4 + 7x - 7)$

$\boxed{B = (4x + 4)(11x - 3)}$

$C = 64x^2 - 9$

$C = (8x)^2 - 3^2$

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

$D = -(2x + 1) + (2x + 1)(-8x + 10)$

$D = -(2x + 1) \times 1 + (2x + 1)(-8x + 10)$

$D = (2x + 1)\big(-1 - 8x + 10\big)$

$\boxed{D = (2x + 1)(-8x + 9)}$

$E = (7x + 3)(-2x - 7) - (2x - 6)(-2x - 7)$

$E = (-2x - 7)\big(7x + 3 - (2x - 6)\big)$

$E = (-2x - 7)(7x + 3 - 2x + 6)$

$\boxed{E = (-2x - 7)(5x + 9)}$

$F = 100x^2 - 36 + (8x - 1)(10x + 6)$

$F = (10x)^2 - 6^2 + (8x - 1)(10x + 6)$

$F = (10x + 6)(10x - 6) + (8x - 1)(10x + 6)$

$F = (10x + 6)(10x - 6 + 8x - 1)$

$\boxed{F = (10x + 6)(18x - 7)}$

Corrigé de l'exercice 3

Factoriser les expressions suivantes.

$A = 16\,x^2 - 4$

$A = (4\,x)^2 - 2^2$

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

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

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

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

$$\boxed{B = (-2\,x + 7)\,(2\,x + 11)}$$

$C = (7\,x + 10)^2 - 49$

$C = (7\,x + 10)^2 - 7^2$

$C = (7\,x + 10 + 7)\,(7\,x + 10 - 7)$

$C =$

$$\boxed{C = (7\,x + 17)\,(7\,x + 3)}$$

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

$D = (9\,x + 10) \times 1 - (-x - 1)\,(9\,x + 10)$

$D = (9\,x + 10)\,\big(1 - (-x - 1)\big)$

$D = (9\,x + 10)\,(1 + x + 1)$

$$\boxed{D = (9\,x + 10)\,(x + 2)}$$

$E = (x + 1)\,(4\,x - 2) - (5\,x - 7)\,(x + 1)$

$E = (x + 1)\,\big(4\,x - 2 - (5\,x - 7)\big)$

$E = (x + 1)\,(4\,x - 2 - 5\,x + 7)$

$$\boxed{E = (x + 1)\,(-x + 5)}$$

$F = 100\,x^2 - 49 - (3\,x + 9)\,(10\,x + 7)$

$F = (10\,x)^2 - 7^2 - (3\,x + 9)\,(10\,x + 7)$

$F = (10\,x + 7)\,(10\,x - 7) - (3\,x + 9)\,(10\,x + 7)$

$F = (10\,x + 7)\,\big(10\,x - 7 - (3\,x + 9)\big)$

$F = (10\,x + 7)\,(10\,x - 7 - 3\,x - 9)$

$$\boxed{F = (10\,x + 7)\,(7\,x - 16)}$$

Corrigé de l'exercice 4

Factoriser les expressions suivantes.

$A = -(8\,x + 1)\,(-5\,x - 7) - (7\,x - 9)\,(8\,x + 1)$

$A = (8\,x + 1)\,\big(-(-5\,x - 7) - (7\,x - 9)\big)$

$A = (8\,x + 1)\,(5\,x + 7 - 7\,x + 9)$

$$\boxed{A = (8\,x + 1)\,(-2\,x + 16)}$$

$B = (3\,x + 6)^2 - 4$

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

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

$B =$

$$\boxed{B = (3\,x + 8)\,(3\,x + 4)}$$

$C = -(-6\,x + 3)\,(4\,x + 9) + 16\,x^2 - 81$

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

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

$C = (4\,x + 9)\,\big(-(-6\,x + 3) + 4\,x - 9\big)$

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

$$\boxed{C = (4\,x + 9)\,(10\,x - 12)}$$

$D = 25\,x^2 - 64$

$D = (5\,x)^2 - 8^2$

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

$E = -(-2\,x - 4) + (-2\,x - 4)\,(-8\,x - 4)$

$E = -(-2\,x - 4) \times 1 + (-2\,x - 4)\,(-8\,x - 4)$

$E = (-2\,x - 4)\,\big(-1 - 8\,x - 4\big)$

$$\boxed{E = (-2\,x - 4)\,(-8\,x - 5)}$$

$F = -(9\,x + 3)\,(10\,x + 7) + (10\,x + 7)^2$

$F = (10\,x + 7)\,\big(-(9\,x + 3) + 10\,x + 7\big)$

$F = (10\,x + 7)\,(-9\,x - 3 + 10\,x + 7)$

$$\boxed{F = (10\,x + 7)\,(x + 4)}$$

Corrigé de l'exercice 5

Factoriser les expressions suivantes.

$A = (6x-1)(7x+7) + 36x^2 - 1$
$A = (6x-1)(7x+7) + (6x)^2 - 1^2$
$A = (6x-1)(7x+7) + (6x-1)(6x+1)$
$A = (6x-1)(7x+7+6x+1)$

$$\boxed{A = (6x-1)(13x+8)}$$

$B = (6x+4) + (6x+4)(5x+4)$
$B = (6x+4) \times 1 + (6x+4)(5x+4)$
$B = (6x+4)(1+5x+4)$

$$\boxed{B = (6x+4)(5x+5)}$$

$C = x^2 - 81$
$C = x^2 - 9^2$

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

$D = (-2x+3)(9x-2) - (-10x-7)(9x-2)$
$D = (9x-2)\big(-2x+3-(-10x-7)\big)$
$D = (9x-2)(-2x+3+10x+7)$

$$\boxed{D = (9x-2)(8x+10)}$$

$E = (-4x+6)^2 - (-4x+6)(4x+3)$
$E = (-4x+6)\big(-4x+6-(4x+3)\big)$
$E = (-4x+6)(-4x+6-4x-3)$

$$\boxed{E = (-4x+6)(-8x+3)}$$

$F = (-4x-8)^2 - 25$
$F = (-4x-8)^2 - 5^2$
$F = (-4x-8+5)(-4x-8-5)$
$F =$

$$\boxed{F = (-4x-3)(-4x-13)}$$

Corrigé de l'exercice 6

Factoriser les expressions suivantes.

$A = (6x-3)^2 - 4$
$A = (6x-3)^2 - 2^2$
$A = (6x-3+2)(6x-3-2)$
$A =$

$$\boxed{A = (6x-1)(6x-5)}$$

$B = 49x^2 - 100 - (7x+10)(9x-8)$
$B = (7x)^2 - 10^2 - (7x+10)(9x-8)$
$B = (7x+10)(7x-10) - (7x+10)(9x-8)$
$B = (7x+10)\big(7x-10-(9x-8)\big)$
$B = (7x+10)(7x-10-9x+8)$

$$\boxed{B = (7x+10)(-2x-2)}$$

$C = (7x-1)(3x+1) + (7x-1)(3x-5)$
$C = (7x-1)(3x+1+3x-5)$

$$\boxed{C = (7x-1)(6x-4)}$$

$D = -(-5x+8) - (-5x-6)(-5x+8)$
$D = -(-5x+8) \times 1 - (-5x-6)(-5x+8)$
$D = (-5x+8)\big(-1-(-5x-6)\big)$
$D = (-5x+8)(-1+5x+6)$

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

$E = 16x^2 - 9$
$E = (4x)^2 - 3^2$

$$\boxed{E = (4x+3)(4x-3)}$$

$F = (x-5)(-3x+10) + (-3x+10)^2$
$F = (-3x+10)(x-5-3x+10)$

$$\boxed{F = (-3x+10)(-2x+5)}$$