9 Factorise chaque expression.

$D = 9x^2 + 30x + 25$

$D = (3x)^2 + 2 \times 3x \times 5 + (5)^2$

$D = (3x + 5)^2$

$E = x^2 + 10x + 25$

$E = (x)^2 + 2 \times x \times 5 + (5)^2$

$E = (x + 5)^2$

$F = 4t^2 + 24t + 36$

$F = (2t)^2 + 2 \times 2t \times 6 + (6)^2$

$F = (2t + 6)^2$

10 Factorise chaque expression.

$G = 9x^2 + 64 + 48x$

$G = (3x)^2 + (8)^2 + 2 \times 3x \times 8$

$G = (3x + 8)^2$

$H = 9 + 4x^2 - 12x$

$H = (3)^2 + (2x)^2 - 2 \times 3 \times 2x$

$H = (3 - 2x)^2$

$J = x^2 - 2x + 1$

$J = (x)^2 - 2 \times x \times 1 + (1)^2$

$J = (x - 1)^2$

$K = y^2 - 18y + 81$

$K = (y)^2 - 2 \times y \times 9 + (9)^2$

$K = (y - 9)^2$

$L = 16x^2 + 25 - 40x$

$L = (4x)^2 + (5)^2 - 2 \times 4x \times 5$

$L = (4x - 5)^2$

11 Factorise chaque expression.

$M = x^2 - 49$

$M = (x)^2 - (7)^2$

$M = (x + 7)(x - 7)$

$N = 81 - t^2$

$N = (9)^2 - (t)^2$

$N = (9 - t)(9 + t)$

$P = 16x^2 - 36$

$P = (4x)^2 - (6)^2$

$P = (4x - 6)(4x + 6)$

$Q = 25 - 4y^2$

$Q = (5)^2 - (2y)^2$

$Q = (5 - 2y)(5 + 2y)$

12 Factorise puis réduis chaque expression.

$R = (x + 4)^2 - 49$

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

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

$R = (x - 3)(x + 11)$

$S = (x - 4)^2 - (2x - 1)^2$

$a^2 - b^2$ avec $a = (x - 4)$ et $b = (2x - 1)$

$S = [(x - 4) - (2x - 1)][(x - 4) + (2x - 1)]$

$S = [x - 4 - 2x + 1][x - 4 + 2x - 1]$

$S = (- x - 3)(3x - 5)$

$T = 4 - (1 - 3x)^2$

$T = 2^2 - (1 - 3x)^2$

$T = (2 + (1 - 3x))(2 - (1 - 3x))$

$T = (3 - 3x)(1 + 3x)$

13 Factorise puis réduis chaque expression.

$U = (3 - 2x)^2 - 4$

$U = (3 - 2x)^2 - 2^2$

$U = (3 - 2x - 2)(3 - 2x + 2)$

$U = (1 - 2x)(5 - 2x)$ ou $U = (-2x + 1)(-2x + 5)$

$V = 121 - (x - 7)^2$

$V = (11)^2 - (x - 7)^2$

$V = [11 - (x - 7)][11 + (x - 7)]$

$V = [11 - x + 7][11 + x - 7]$

$V = (18 - x)(4 + x)$ ou $V = (-x + 18)(x + 4)$

$W = (7x + 8)^2 - (9 - 5x)^2$

$W = [(7x + 8) - (9 - 5x)][(7x + 8) + (9 - 5x)]$

$W = [7x + 8 - 9 + 5x][7x + 8 + 9 - 5x]$

$W = (12x - 1)(2x + 17)$