AP Factorisation

Ex1

$A = a^2 + ab = \boxed{a(a+b)}$

$B = 5k - kt = \boxed{k(5-t)}$

$C = ab - b = \boxed{b(a-b)}$

$D = xy^2 + x^2y = xy \times y + xy \times x$

$= \boxed{xy(y+x)}$

Ex2

$E = (2-5x)^2 + (2-5x)(3-x)$

$= (2-5x)(2-5x) + (2-5x)(3-x)$

$= (2-5x)(2-5x+3-x)$

$= \boxed{(2-5x)(-6x+5)}$

$F = 6n(2-5n) - (2-5n)^2$

$= 6n(2-5n) - (2-5n)(2-5n)$

$= (2-5n)(6n-(2-5n))$

$= (2-5n)(6n-2+5n)$

$= \boxed{(2-5n)(11n-2)}$

$G = 4(1-a)^2 - 3(1-a)$

$= (1-a) \times 4(1-a) - (1-a) \times 3$

$= (1-a)(4(1-a)-3)$

$= (1-a)(4-4a-3)$

$= \boxed{(1-a)(1-4a)}$

Ex3

$H = x^2 - 9 = x^2 - 3^2 = \boxed{(x+3)(x-3)}$

$I = 25a^2 - 16 = (5a)^2 - 4^2 = \boxed{(5a+4)(5a-4)}$

$J = 16t^2 - 8t + 1 = (4t)^2 - 8t + 1 = \boxed{(4t-1)^2}$

$8t = 2 \times 4t \times 1$

$K = b^2 + 8b + 16 = b^2 + 8b + 4^2 = \boxed{(b+4)^2}$

$8b = 2 \times b \times 4$

$L = 4n^2 + 10n + 9 = (2n)^2 + 10n + 3^2$

$10n \neq 2 \times 2n \times 3$

$= 12n$

Pas de factorisation possible avec les identités remarquables pour L

Ex4

$M = (2-x)^2 - (3x+7)^2 = (2-x+3x+7)(2-x-(3x+7))$

$= (2x+9)(2-x-3x-7)$

$= \boxed{(2x+9)(-4x-5)}$

$N = (5n-1)^2 - (2-4n)^2 = (5n-1+2-4n)(5n-1-(2-4n))$

$= (n+1)(5n-1-2+4n)$

$= \boxed{(n+1)(9n-3)}$

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$O = 4k^2 - (3-k)^2 = (2k)^2 - (3-k)^2$

$= (2k+3-k)(2k-(3-k))$

$= (k+3)(2k-3+k)$

$= \boxed{(k+3)(3k-3)}$