

Drill factorisation : Solutions

Semaine 1 : Factoriser en utilisant la mise en évidence :

$$1. ab - b^2 = b(a - b)$$

$$2. xy + y = y(x + 1)$$

$$3. a^2b - ab^2 = ab(a - b)$$

$$4. xy - 2y = y(x - 2)$$

$$5. x^3y^2 - x^2y^3 = x^2y^2(x - y)$$

$$6. 6x^2y + 4xy^2 = 2xy(3x + 2y)$$

$$7. 15x^7b^2 - 10x^5b^3 = 5x^5b^2(3x^2 - 2b)$$

$$8. y(b - a) + b(b - a) = (b - a)(y + b)$$

$$9. 12a^2b^2 - 18ab^3 + 24a^3b = 6ab(2ab - 3b^2 + 4a^2)$$

$$10. 12x^2y^3 - 30x^3y^2 + 18xy^4 = 6xy^2(2xy - 5x^2 + 3y^2)$$

$$11. 3x^2 - 9xy^2 + 6x = 3x(x - 3y^2 + 2)$$

$$12. 3xyz^3 - 21x^2y^2z^2 - 6x^3y^3z = 3xyz(z^2 - 7xy - 2x^2y^2)$$

$$13. 5a(a+2)^2 - 3a^2(a+2) = a(a+2)[5(a+2) - 3a]$$

$$= a(a+2)(2a+10) = 2a(a+2)(a+5)$$

$$14. 5(x+y-z) - 10x(x+y-z) = (x+y-z)(1-2x)$$

$$15. 45x^3y^4z^5 + 60x^5y^2z - 90x^4y^3z^2 = 15x^3y^2z(3y^2z^4 + 4x^2 - 6xy^3z)$$

$$16. 39a^5b^5c^3 - 65a^5b^3cd = 13a^5b^3c(3b^2c^2 - 5d)$$

$$17. -51a^4b^5c + 17a^3b^2c - 32a^3b^5c^4 = 17a^3b^2c(-3ab^3 + 1 - 2b^3c^3)$$

$$18. a(x-y) + b(y-x) = a(x-y) - b(x-y) \\ = (x-y)(a-b)$$

$$19. 2a(b-c) - 4c(c-b) = 2a(b-c) + 4c(b-c) \\ = (b-c)(2a+4c)$$

$$20. 9a^2b(x+y) + 3ab^2(x+y) = 3ab(x+y)(3a+b)$$

$$21. a(m-n) - b(n-m) = a(m-n) + b(m-n) \\ = (a+b)(m-n)$$

$$22. 5a^2(b-2) + 15a(2-b) = 5a^2(b-2) - 15a(b-2) \\ = 5a(b-2)(a-3)$$