ILLAWARRA TUTORING

This worksheet focuses on recognising patterns in binomial products and learning how to expand them effectively. Work through each question carefully and show all your workings.

Easy Questions

1. Expand $(a+b)^2$.
2. Expand $(a-b)^2$.
3. Expand $(x+3)(x+2)$.
4. Expand $(2x+3)(x+4)$.
5. Expand $(3y-2)(y+5)$.

Intermediate Questions

6. Expand $(2a+b)(3a+4b)$.
7. Expand $(x+7)(2x-3)$.
8. Expand $(3m+4)(m-2)$.
9. Expand $(5p-1)(2p+3)$.
10. Expand $(2x+5)(3x-2)$.
11. Expand $(4a-3)(2a+7)$.
12. Expand $(x+2)(x-3)$.
13. Expand $(3x+4)(x+6)$.
14. Expand $(2y-5)(4y+9)$.
15. Expand $(a+3b)(2a-5b)$.
16. Expand $(3x-7)(x+8)$.
17. Expand $(2a+4)(3a-2)$.
18. Expand $(x-3)(x-5)$.
19. Expand $(2x+3)(x-6)$.
20. Expand $(5m+2)(2m-1)$.

Hard Questions

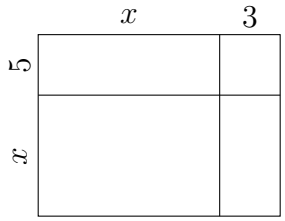
21. Given that $(x+a)(x+b) = x^2 + (a+b)x + ab$, expand $(x+3)(x+7)$.

22. Expand $(2x-5)^2$.

23. Expand $(3a+2b)(2a-4b)$.

24. A rectangular plot has a length of $(x+4)$ and a width of $(x-2)$. Write an expression for its area and expand it fully.

25. Expand $(x+3)(x+5)$ using an area model.



Use the diagram to write down each term and then combine them to get the final expanded form.

26. Expand $(2x+1)(3x+2)$.

27. Expand $(4x-3)(2x-5)$.

28. Expand $\big[(x+2)-3\big]\big[(x-2)+5\big]$.

29. Expand $(5y-2)(y+3)$.

30. Expand $(2a+5)(a-3)$.