



This worksheet will help you develop your skills in breaking down and simplifying complex algebraic expressions. Work through each question carefully and show your working. All mathematical expressions are to be interpreted with `display` style formatting.

Easy Questions

1. Simplify the expression $3x + 5x$.
2. Simplify the expression $7a - 2a$.
3. Simplify the expression $4y + 3 - 2y + 5$.
4. Simplify the expression $2(x + 4)$.
5. Simplify the expression $(3b + 2) - (b + 5)$.

Intermediate Questions

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

Hard Questions

21. Simplify the expression $2[3x - 2(x - 4)] + x$.
22. Simplify the expression $3[2y + 3(1 - y)] - 2(4 - y)$.
23. Simplify the expression $(2x + 3) - 2[(x - 1) + (x + 4)]$.
24. Simplify the expression $4[3 - 2(a - 3)] + 5a$.
25. Simplify the expression $2[3 - (x - 2)] - 3[2 - (2x - 5)]$.
26. Simplify the expression $(2p + 3q) - [p - (q - 2p)]$.
27. Simplify the expression $32[x + 3] - [x - 2]$.
28. Simplify the expression $(a + 2b) - 2[a - (b + 3)] + (2b - a)$.
29. Simplify the expression $2[3x - x - 2[1 - (x - 3)]]$.
30. Simplify the expression $-[2(x - 3) - 32 - (x - 1)] + x$.