ILLAWARRA TUTORING

   In this worksheet you will practise grouping terms in pairs to extract common factors and simplify expressions. Each question involves rewriting a four-term expression by grouping pairs of terms and factorising the resulting common binomials.

Easy Questions

1. Factorise the expression $2x + 2y + 3x + 3y$.

2. Factorise the expression $4m + 6n + 2m + 3n$.

3. Factorise $7a + 7b + 5a + 5b$.

4. Factorise the expression $9x + 12y + 3x + 4y$.

5. Factorise $10p + 15q + 2p + 3q$.

Intermediate Questions

6. Factorise $3a + 5b + 9a + 15b$.

7. Factorise $2x - 4 - 3x + 6$.

8. Factorise $6m + 9n - 2m - 3n$.

9. Factorise $5x + 10y + 8x + 16y$.

10. Factorise $4p - 8q + 5p - 10q$.

11. Factorise $a + 2b + 3a + 6b$.

12. Factorise $7r - 14s + 9r - 18s$.

13. Factorise $2x + 3 - 4x - 6$.

14. Factorise $12u + 16v + 9u + 12v$.

15. Factorise $8a^2 + 12ab + 2a^2 + 3ab$.

16. Factorise $x^2 + 2xy - 3x - 6y$.

17. Factorise $5m^2 - 10m + 2m - 4$.

18. Factorise $6xy + 9y^2 - 4x - 6y$.

19. Factorise $10a + 15b - 6a - 9b$.

20. Factorise $3p + 6q + 8p + 16q$.

Hard Questions

21. Factorise $4xy + 6x - 8y - 12$.

22. Factorise $2a^2 + 4ab - 3a - 6b$.

23. Factorise $5x^2 + 10xy - x - 2y$.

24. Factorise $6x^2 - 2x - 9x + 3$.

25. Factorise $-2m^2 - 3mn + 8m + 12n$.

26. Factorise $7xy - 14x + 5y - 10$.

27. Factorise $5ab + 10ac - b - 2c$.

28. Factorise $6x - 9 - 4xy - 6y$.

29. Factorise $6x + 9 - 4xy - 6y$.

30. Factorise $3pq + 6p + 2q + 4$.

31. Factorise $4x^2 + 8x - x - 2$.