

This worksheet will practise grouping terms in pairs to extract common factors and simplify expressions.

## **Easy Questions**

- 1. Please factor by grouping:  $x^2 + 3x + 2x + 6$ .
- 2. Please factor by grouping:  $3x^2 + 6x + 2x + 4$ .
- 3. Please factor by grouping: 5xy + 10y + xz + 2z.
- 4. Please factor by grouping:  $a^2b + 2ab + 3a + 6$ .
- 5. Please factor by grouping:  $4m^2 + 8m + m + 2$ .

## Intermediate Questions

- 6. Please factor by grouping: 3ab + 6ac + 2b + 4c.
- 7. Please factor by grouping:  $4x^2y + 8xy^2 + 5x + 10y$ .
- 8. Please factor by grouping:  $6m^2 9m + 4m 6$ .
- 9. Please factor by grouping:  $5x^3 + 10x^2 + 2x + 4$ .
- 10. Please factor by grouping: xy + 2x + 3y + 6.
- 11. Please factor by grouping: 7ab + 14a + 3b + 6.
- 12. Please factor by grouping:  $8x^2 4xy + 2x y$ .
- 13. Please factor by grouping:  $9a^2 + 6a + 3a + 2$ .
- 14. Please factor by grouping: 12xy 18x + 4y 6.
- 15. Please factor by grouping:  $10p^2q + 15pq + 2p + 3$ .
- 16. Please factor by grouping:  $6a^2 + 9a + 4a + 6$ .
- 17. Please factor by grouping:  $5x^2 20x + 3x 12$ .
- 18. Please factor by grouping: xy 3x + 5y 15.
- 19. Please factor by grouping: 4ab + 8a + 3b + 6.
- 20. Please factor by grouping: 6mn + 9m + 4n + 6.

## **Hard Questions**

- 21. Please factor by grouping:  $2x^3 + 4x^2 + 3x + 6$ .
- 22. Please factor by grouping:  $3x^3 + 6x^2 + 5x + 10$ .
- 23. Please factor by grouping:  $4a^3b + 8a^2b + 3a^2 + 6a$ .
- 24. Please factor by grouping:  $5xy^2 + 10y^2 + 3x + 6$ .
- 25. Please factor by grouping:  $6x^2 + 12x x 2$ .
- 26. Please factor by grouping:  $2a^2b + 4ab + 3a + 6$ .
- 27. Please factor by grouping:  $7x^2 + 14x + 2x + 4$ .
- 28. Please factor by grouping:  $9x^2 3x + 6x 2$ .
- 29. Please factor by grouping: 8xy + 12x + 2y + 3.
- 30. Please factor by grouping:  $4x + 8 + 5x^2 + 10x$ .