Mixed Factoring Practice

Before factoring: Check for a common factor, look at the terms, and decide which structure you recognize.

A. Choose the First Strategy

For each expression, name the factoring method you would try first. Do not factor yet.

1. $x^2 - 16$ Type: _____
2. $x^2 + 5x + 6$ Type: _____
3. $6x + 9$ Type: _____
4. $x^2 + 6x + 9$ Type: _____
5. $2x^2 + 5x + 2$ Type: _____
6. $(x + 1)^2 + 5(x + 1) + 6$ Type: _____

B. Mixed Factoring

Factor every expression completely. The method is not identified; choose it yourself. Check your factors before moving on.

MILD

7. $8x^2 + 12x$
8. $x^2 + 2x - 8$
9. $4x^2 - 9$
10. $3x^2 + 5x - 2$
11. $x^2 - 10x + 25$
12. $(x - 2)^2 - (x - 2) - 6$

MEDIUM

13. $12x^2 - 18x$
14. $x^2 - 9y^2$
15. $x^2 - 7x + 12$
16. $4x^2 + 12x + 9$
17. $4x^2 - 8x + 3$
18. $2(x + 2)^2 + 7(x + 2) + 3$

SPICY

19. $x^2 - x - 12$
20. $8x^2 - 32$
21. $3x^2 + 18x + 27$
22. $(x + 2)^2 - 25$
23. $6x^2 + 15x + 6$
24. $(x^2)^2 - 5(x^2) + 4$

EXTRA SPICY

25. $25 + 30x + 9x^2$
26. $-3x^2 + 12x - 12$
27. $24 + 2x - 2x^2$
28. $12x^2 + 10x - 12$
29. $3(x - 2)^2 + 11(x - 2) + 6$
30. $(2x - 1)^2 - (x + 3)^2$