Factoring

1. Find the GCF of each of the terms
2. Make New Parenthesis and Write the GCF outside
3. Fill the Parenthesis by dividing everything by the GCF
4. Check work by distribution

1. $6a^3 + 15a \ =$

8. $x^2y^4 - x^2y - 4x^2 \ =$

2. $32b^2 + 12b \ =$

9. $a^{5n} + a^{2n} \ =$

3. $12a^5b^2 + 16a^4b \ =$

10. $3x^2y - 9xy + 12y \ =$

4. $9x^2 + 18y^4 \ =$

11. $25x^5 + 30x^3 - 15x^2 \ =$

5. $7x^2 - 15y \ =$

12. $20a^5b^3 + 30a^3b^2 - 40a^2b^3 \ =$

6. $y^4 - 3y^2 - 2y \ =$

13. $4x^6 + 16x^{10} + 64x^{12} \ =$

7. $2x^5 + 3x^4 - 4x^2 \ =$

Simplify each product using the Distributive Property.

8. $(x + 7)(x + 4)$

9. $(y - 3)(y + 8)$

10. $(m + 6)(m - 7)$

11. $(c - 10)(c - 5)$

12. $(2r - 3)(r + 1)$

13. $(2x + 7)(3x - 4)$

14. $(x + 5)(x - 4)$

15. $(a - 1)(a - 11)$

16. $(w - 2)(w + 6)$

17. $(2h - 7)(h + 9)$

18. $(x - 8)(3x + 1)$

19. $(3p + 4)(2p + 5)$

20. $(a + 8)(a - 2)$

21. $(x + 4)(4x - 5)$

22. $(k - 6)(k + 8)$

23. $(b - 3)(b - 9)$

24. $(5m - 2)(m + 3)$

25. $(9z + 4)(5z - 3)$

26. $(3h + 2)(6h - 5)$

27. $(4w + 13)(w + 2)$

28. $(8c - 1)(6c - 7)$