

Algebra II
Factoring Practice

Name _____

Find the **Greatest Common Factor** of each of the following.

1. $15ab, 10ac$

2. $14xy, 28$

3. $-168, 126, 210$

4. $17xy, 15x^2z$

5. $12am^2, 18a^3m$

6. $105x^3y^2, 165x^2y^4$

Factor, if possible.

7. $4x + 6y$

8. $9a^2b - 18ab^3$

9. $36 - 27m$

10. $28x^2y - 7xy$

11. $3a^2 + 6ab + 9$

12. $24xy - 2x + 12xy^2$

13. $ay + ax^2 + ab$

14. $28ay + 14a^2x - 21y$

Multiply.

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

16. $(a+9)(a+2)$

17. $(x-8)(x+1)$

18. $(m-11)(m-13)$

19. $(t^2+3)(t^2+1)$

20. $(p+12)(p-15)$

21. $(y-11)(y-11)$

22. $(q-8)(q+4)$

Factor.

23. $m^2 - 12m + 32$

24. $a^2 + 9a - 36$

25. $n^2 - 10n + 24$

26. $a^2 + 7a - 44$

27. $q^2 - 5q - 66$

28. $g^2 + 16g + 55$

29. $a^2 + 7a - 44$

30. $18 - 13a - a^2$

Factoring by Grouping

Write each of the following in factored form.

1. $x(y+4)+5(y+4)$

2. $m(n-p)-q(n-p)$

3. $y(x-2)-3(2-x)$

4. $(am-mn)-(4a-4n)$

5. $(7x^4-6x^3y)-(14x-12y)$

6. $(at-mt)+(3m-3a)$

Factor by any method.

11. $20x^2+12x-5x-3$

12. $n^2+8n+16$

13. $7h^2-21h-h+3$

14. $10z^2-15z+4z-6$

15. y^2-49

16. x^3-b^3

17. x^3+27

18. $3x^2+21x+2x+14$

19. $2y^2+8xy-3xy-12x^2$

20. $15n^2+3mn-25mn-5m^2$

21. $6a^2-48ab+24b^2$