The Weekly Rigor

No. 311 "A mathematician is a machine for turning coffee into theorems." June 6, 2020

30 Problems in Factoring by Grouping

(Part 2)

17. $5mn + 25m + 3n^3 + 15n^2$.

18. $4au + 24av - 5bu - 30bv$.

19. $15xw + 18xk + 25yw + 30yk$.

20. $7xy + 28x^3 + y + 4x^2$.

21. $6b^3 + 16b^2 - 15b - 40$.

22. $12r^3 + 20r^2 + 15r + 25$.

23. $4b^3 + b^2 + 8b + 2$.

24. $28k^3 - 4k^2 - 35k + 5$.

25. $7xy - 3n - x + 21ny.$

26. $42ab - 25b - 35a + 30b^2.$

27. $21uv + 8b + 3u + 56bv.$

28. $28xy - 7k - 49x + 4ky.$

29. $4x^2 - 12x + x - 3.$

30. $3x^2 + 2x + 6x + 4.$

ANSWERS

1. $(a+b)(c+d)$	2. $(a-b)(c+d)$
3. $(a-b)(c-d)$	4. $(b+y)(a+x)$
5. $(a+b)(x-y)$	6. $(a+1)(b-2)$
7. $(a-2b)(c-3d)$	8. $(a^2-b^2)(c^2-d^2)$
9. $(a^n-b^n)(x^n+y^n)$	10. $(x+b+c)(a+x)$
11. $(x-2)(x^2+5)$	12. $(x-3)(x^2+4)$
13. $(x-1)(x^2+2)$	14. $(x+6)(x^2-2)$
15. $(3x-2)(x^2-2)$	16. $(x-1)(x^2-5)$
17. $(5m+3n^2)(n+5)$	18. $(4a-5b)(u+6v)$
19. $(3x+5y)(5w+6k)$	20. $(7x+1)(y+4x^2)$
21. $(2b^2-5)(3b+8)$	22. $(4r^2+5)(3r+5)$
23. $(b^2+2)(4b+1)$	24. $(4k^2-5)(7k-1)$
25. $(x+3n)(7y-1)$	26. $(7a+5b)(6b-5)$
27. $(3u+8b)(7v+1)$	28. $(7x+k)(4y-7)$
29. $(x-3)(4x+1)$	30. $(3x+2)(x+2)$