8-8 Practice   Form G

Factoring by Grouping

Find the GCF of the first two terms and the GCF of the last two terms for each polynomial.

1. $12x^3 + 3x^2 + 20x + 5$

2. $6v^3 + 42v^2 + 5v + 35$

3. $8t^3 + 36t^2 + 2t + 9$

4. $10s^3 + 35s^2 + 6s + 21$

5. $9m^3 - 6m^2 + 12m - 8$

6. $8w^3 + 6w^2 - 28w - 21$

7. $7r^3 + 16r^2 - 9r - 72$

8. $21x^3 - 28x^2 - 6x + 8$

Factor each expression.

9. $8j^3 + 4j^2 + 10j + 5$

10. $2m^3 + 8m^2 + 9m + 36$

11. $10s^3 + 25s^2 + 8s + 20$

12. $6x^3 + 9x^2 + 2x + 3$

13. $21x^3 + 6x^2 - 28x - 8$

14. $8w^3 + 12w^2 + 10w + 15$

15. $18r^3 - 12r^2 + 21r - 14$

16. $36n^3 - 27n^2 - 8n + 6$

17. $110b^3 + 77b^2 - 60b - 42$

18. $64d^3 - 40d^2 - 24d + 15$

19. $10s^3 + 80s^2 - 7s - 56$

20. $25j^3 + 15j^2 - 5j - 3$

21. $24c^3 - 84c^2 + 10c - 35$

22. $27f^3 + 9f^2 - 24f - 8$