

3-2 GCF/Factoring by Grouping

Secondary II

Objective: I can factor out the greatest common factor.

I can factor by grouping.

Name: _____

Period: _____

Factor out the Greatest Common Factor.

1. $a^2b + 7ab$

2. $18x^2y^3 - 6xy^2$

3. $3b^3 + 9b^2 + 18b$

4. $4m^3 + 8m^2 - 16m$

Factor out the Greatest Common Binomial Factor.

5. $n(n-9) - 1(n-9)$

6. $x(x-4) + 6(x-4)$

7. $k(k-8) - 5(k-8)$

8. $z(z-12) - 2(z-12)$

9. $2n(n-6) + 18(n-6)$

10. $4v(v-2) + 4(v-2)$

11. $2p(p+2) - 2(p+2)$

12. $p(3p-5) + 1(3p-5)$

Factor by grouping.

13. $3n^2 - 6n - 2n + 4$

14. $2r^2 + r + 10r + 5$

15. $2n^2 - 3n + 6n - 9$

16. $2b^2 + b - 4b - 2$

17. $36x^2 + 6x + 6x + 1$

18. $6x^2 + 8x + 18x + 24$

19. $9k^2 + 63k + 3k + 21$

20. $7x^2 - 3x + 14x - 6$

Answer Key:

1. $ab(a + 7)$

3. $3b(b^2 + 3b + 6)$

5. $(n - 9)(n - 1)$

7. $(k - 8)(k - 5)$

9. $2(n - 6)(n + 9)$

11. $2(p + 2)(p - 1)$

13. $(n - 2)(3n - 2)$

15. $(2n - 3)(n + 3)$

17. $(6x + 1)^2$

19. $3(k + 7)(3k + 1)$