Algebra 1
Unit 6 Worksheet 5

Directions: Please answer the following questions. **Show work!!**

Factor by removing the GCF.

1. $9x^5 - 5x^2$

2. $36p + 24p^3$

Factor by grouping.

3. $xy - 4y - 7y + 28$

4. $4x^3 + 36x^2 + 3x + 27$

5. $4x^2 + x - 24x - 6$

6. $m^3 - 5m^2 + 2m - 10$

Factor the trinomial.

7. $m^2 + 12m + 11$

8. $z^2 - 13z + 30$

9. $x^2 - 49$

10. $n^2 - 33n - 70$

11. $x^2 - 11x + 18$

12. $y^2 - 4y - 21$

13. $x^2 + 13x + 42$

14. $x^2 - 3x - 18$

15. $x^2 + 6x - 27$

16. $x^2 + 9x - 36$

Simplify. Make sure to pay attention to the operation (add, subtract or multiply).

17. $(y - 8)(3y + 6)$

18. $(5y^3 - 2y + 1) - (9y^3 - 3y^2 + 11y - 5)$

19. $(w^2 + 9)(w^3 + 4)$

20. $(11p - 1)(4p - 7)$

21. $(24y^4 + 7y^2 - 16) + (13y^2 - 25y + 30)$

22. $(2p - 1)(p^2 + 12p - 6)$