SM2 Factoring Test Review

1. In your own words, explain what it means to completely factor a polynomial.

Factor out the greatest common factor. If the leading coefficient is negative, factor out a negative GCF.

2. $10x^2 - 5x$

3. $-12w^3 + 21$

4. $12p^5q + 36p^4q + 8pq$

Factor by grouping. Don't forget to factor out the GCF first, if there is one.

5. $15m^3 + 5m^2 - 6m - 2$

6. $4rt - 8r + t - 2$

7. $6n^4 + 10n^3 + 36n^2 + 60n$

8. In your own words, explain how to determine whether a trinomial is prime.

Completely factor each trinomial. If the trinomial is prime, say so. Don't forget to factor out the GCF first, if there is one. If the first term is negative, be sure to take out a negative GCF.

9. $v^2 - 4v - 21$

10. $w^2 + 3w - 10$

11. $x^2 + 6x + 14$

12. $m^2 - 6m + 9$

13. $5p^2 - 25p + 60$

14. $3r^3 + 15r^2 - 42r$

15. $-4k^2 - 20k + 24$

16. $4n^2 - 5n - 6$

17. $7t^2 + 15t - 4$

18. $2q^2 - 13q + 20$

19. $9a^2 + 24a + 16$

20. $-10y^2 + 35y + 20$

21. $6x^2 - 5x - 4$

22. $4x^2 + 30x + 36$

23. $8k^2 + 34k - 9$

25. $z^2 - 4$

26. $x^2 + 9$

27. $49m^2 - 16$

28. $64 - t^2$

29. $75u^2 - 12$

30. $18x^2 - 200$