Algebra 1/ Unit 7 PRACTICE TEST - Factoring **Name:_____ Period:____**

Explorations in Core Math

1. What is the Greatest Common Factor of $-14x^4$ and $28x^5$?

2. What is the GCF of $12n^3 + 15n^6 - 30n^{10} + 6$?

3. Factor the GCF out of the expression $-8n^8 + 6n^4 - n^2$.

4. What is the GCF of the expressions below?
$6(b-3)^{10}$ and $12(b-3)^5$

5. Factor the polynomial by grouping.
$6p^3 + 4p^2 + 3p + 2$

6. What is the fully factored form of the polynomial $b^2 - 3b - 18$?

7. What is the fully factored form of the polynomial $5a^2 + 11a + 2$?

8. The area of a TV screen is $(35m - 42)\ in^2$. Factor the polynomial to find expressions for the dimensions of the TV screen.

9. Which of the following polynomials have a common binomial factor?
   a. $(x^2 - 49)$ and $(x^2 + 14x + 49)$
   b. $(x^2 - 49)$ and $(x^2 + 14x - 49)$
   c. $(x^2 + 49)$ and $(x^2 + 14x + 49)$
   d. $(x^2 + 49)$ and $(x^2 + 14x - 49)$

10. Which expression is NOT equivalent to the polynomial $3p^3 + 15p^2 - 108p$?
    a. $3p(p+9)(p-4)$
    b. $3p(p^3 + 5p^2 - 36p)$
    c. $3p(p-0)(p+4)$
    d. $3p(p^2 + 5p - 36)$

11. Give 3 examples of perfect square trinomials. How do you know they are perfect squares?

12. What is the fully factored form of the polynomial $x^2 + 8x + 16$?

13. Give 3 examples of the difference of perfect squares. How do you know they are the difference of perfect squares?

14. What is the factored form of the polynomial $x^2 - 36$?

15. What is the factored form of the polynomial $x^2 + 36$?

16. Factor the polynomial $x^2 + 4x + 3$

17. Factor the polynomial $x^2 - 7x + 6$

18. Factor the polynomial $x^2 - x - 2$

19. Factor the polynomial $2x^2 - 11x + 14$

20. What's the first step to take to completely factor the polynomial $-4x^2 + 24x - 36$?