Unit 9: Solving Quadratic Functions Name_____

12.4.D2 ~ Solving Quadratics by Factoring

Past due on_____ Period____

Determine the roots of each quadratic equation via factoring and the Zero Product Property. (If necessary, refer to the 12.4 example "Solving Quadratic Equations Using Factoring" in the Chapter 12 Summary.)

1) $2x^2 - 17x + 30 = 0$

2) $8k^2 + 5k = 0$

3) $3p^2 - 10 = -29p$

4) $7p^2 + 5p = 12$

5) $2x^2 + 15x = -54 + x^2$

6) $x^2 + 12x + 58 = -2 - 5x$

Is the trinomial a perfect square trinomial? If it is, write it in factored form. (If necessary, refer to the 12.5 example "Identifying Special Products of Degree 2" in the Chapter 12 Summary.)

7) $9x^2 - 5x + 4$

8) $4x^2 + 4x + 1$

9) $4x^2 - 14x + 49$

10) $9x^2 - 12x - 4$

11) $x^2 + 20x + 100$

12) $25x^2 + 60x + 36$

Factor each binomial completely. Remember to look for a common factor first!

13) $25k^2 - 9$

14) $200x^2 - 2$

15) $4x^2 - 49$

16) $5x^2 - 320$

17) $12x^2 - 3$

18) $294x^2 - 96$

19) $k^2 - 36$

20) $648n^2 - 128$