Name: Key Period: _____ Date: _____

Section 5.3 Factoring DAY 2

Identify the method(s) used and factor the following expressions completely.

1. $f(x) = x^2 + 4x - 5$ trinomial (method) mult = −5 add = 4 5 and −1 $f(x) = (x+5)(x-1)$ (factored expression)	2. $g(x) = -x^2 + 6x - 8$ (HINT: factor out negative first) GCF, trinomial (method) $g(x) = -(x^2 - 6x + 8)$ mult = 8 add = −6 −4 & −2 $g(x) = -(x-4)(x-2)$ (factored expression)	3. $f(x) = x^2 - 1$ diff. squares (method) $f(x) = (x+1)(x-1)$ (factored expression)
4. $f(x) = x^2 + 9x + 20$ trinomial (method) mult = 20 add = 9 4 & 5 $f(x) = (x+4)(x+5)$ (factored expression)	5. $g(x) = 2x^2 - 5x + 2$ trinomial w/ a ≠ 1 (method) "AC" method $2x^2 - 5x + 2$ (4) mult = 4 add = −5 −4 and −1 $(2x - 1)(x - 2)$ $g(x) = (2x-1)(x-2)$ (factored expression)	6. $h(x) = x^2 - 4x$ GCF (method) GCF: x $h(x) = x(x-4)$ (factored expression)
7. $f(x) = \cancel{3x^2 - 4x + 1}$ $3x^2 + 2x - 1$ trinomial w/ a ≠ 1 (method) "AC" method $3x^2 + 2x - 1$ (−3) mult = −3 add = 2 3 & −1 $(3x - 1)(x + 1)$ $f(x) = (3x-1)(x+1)$ (factored expression)	8. $g(x) = 3x^2 + 10x + 7$ trinomial w/ a ≠ 1 (method) "AC" method $3x^2 + 10x + 7$ (21) mult = 21 add = 10 3 & 7 $(3x + 7)(x + 1)$ $g(x) = (3x+7)(x+1)$ (factored expression)	9. $h(x) = \cancel{2x^2 - 9x - 11}$ $2x^2 - 13x - 24$ trinomial w/ a ≠ 1 (method) "AC" method $2x^2 - 13x - 24$ (−48) mult = −48 add = −13 −16 & 3 $(2x + 3)(x - 8)$ $h(x) = (2x+3)(x-8)$ (factored expression)

10. $f(x)=3x^3-27x$ GCF, diff squares (method) $3x(x^2-9)$ $f(x)=3x(x+3)(x-3)$ (factored expression)	12. $g(x)=4x^2-4x-15$ trinomial w/ A ≠ 1 (method) $4x^2-4x-15$ (−60) mult −60 add −4 −10 and 6 $(2x+3)(2x-5)$ $g(x)=(2x+3)(2x-5)$ (factored expression)	13. $h(x)=x^2+6x+9$ perfect sq. trinomial (method) mult = 9 add = 6 3 and 3 $(x+3)(x+3)$ $h(x)=(x+3)^2$ (factored expression)
14. $f(x)=5x^3-11x^2+2x$ GCF, trinomial w/ a ≠ 1 (method) $x(5x^2-11x+2)$ (10) mult = 10 add = −11 −10 & −1 $x(5x-1)(x-2)$ $f(x)=x(5x-1)(x-2)$ (factored expression)	15. $g(x)=2x^2-10x-12$ GCF, trinomial (method) $2(x^2-5x-6)$ mult = −6 add = −5 −6 and 1 $g(x)=2(x-6)(x+1)$ (factored expression)	16. $h(x)=25x^2-49$ diff. squares (method) $h(x)=(5x-7)(5x+7)$ (factored expression)
17. $f(x)=4x^2-11x+6$ trinomial w/ a ≠ 1 (method) $4x^2-11x+6$ (24) mult = 24 add = −11 −3 and −8 $(4x-3)(x-2)$ $f(x)=(4x-3)(x-2)$ (factored expression)	18. $g(x)=4x^2-20x+25$ trinomial w/ A ≠ 1 (method) $4x^2-20x+25$ (100) mult = 100 add = −20 −10 and −10 $(2x-5)(2x-5)$ $g(x)=(2x-5)^2$ (factored expression)	19. $h(x)=x^4-13x^2+36$ Tricky! ☺ trinomial / diff squares (method) mult = 36 add = −13 −9, −4 $(x^2-9)(x^2-4)$ $h(x)=(x+3)(x-3)(x+2)(x-2)$ (factored expression)

Factoring is really important… seek help if you don't get it!