Name _____   Date _____
UNIT 7   **LESSON 5**

<div align="center">DO NOW</div>

1. Simplify $(x^2 - 6)(x^2 - 6)$	2. Simplify $4(x + 6)(x - 5)$

1. Simplify $(x^2 - 6)(x^2 - 6)$

$$x^4 - 12x^2 + 36$$

2. Simplify $4(x + 6)(x - 5)$

$$(4x + 24)(x - 5)$$

$$4x^2 + 4x - 120$$

<div align="center">Aim: "How do we factoring using the easy tri method?" DAY 2</div>

#	Trinomial with a leading coefficient of <u>one</u>	Factors of the last term
3.	$x^2 - 2x - 24$ $(x - 6)(x + 4)$	1, 24 2, 12 3, 8 $\boxed{4, 6}$
4.	$x^2 + 2x - 35$ $(x + 7)(x - 5)$	1, 35 $\boxed{5, 7}$
5.	$x^2 - x - 6$ $(x - 3)(x + 2)$	1, 6 $\boxed{2, 3}$

Steps to find all the factors of a number on the calculator:	<u>Steps for Easy Trinomial Factoring</u>
1. $y = \#/x(\text{ last term})$ 2. Press 2nd graph to look at the table of factors	1) "Double bubble", with an x in each ( ). 2) The first sign drops down in the 1st ( ). 3) Multiply the given signs to determine the 2nd sign. 4) Find factors of the last # that add or subtract to the middle #. 5) The bigger # goes first! 6) Check by Tabular Method or Double Distributing

6.	$x^2 - 14x + 40$ $(x - 10)(x - 4)$	1, 40 2, 20 $\boxed{4, 10}$
7.	$x^2 - 2x - 48$ $(x - 8)(x + 6)$	1, 48 2, 24 3, 16 4, 12 $\boxed{6, 8}$
8.	$n^2 + 3n - 54$ $(n + 9)(n - 6)$	1, 54 2, 27 3, 18 $\boxed{6, 9}$
9.	$z^2 + 9z - 36$ $(z + 12)(z - 3)$	1, 36 2, 18 $\boxed{3, 12}$ 4, 9 6, 6
10.	$x^2 - 5x - 6$ $(x - 6)(x + 1)$	$\boxed{1, 6}$ 2, 3
11.	$x^2 - 10x + 21$ $(x - 7)(x - 3)$	1, 21 $\boxed{3, 7}$

12.	$x^2 - 21x + 104$ $(x - 13)(x - 8)$	1,104 2,52 8,13
13.	$x^4 + 6x^2 + 5$ $(x^2 + 5)(x^2 + 1)$	1,5
14.	$x^4 + 10x^2 - 24$ $(x^2 + 12)(x^2 - 2)$	1,24 2,12 3,8 4,6
15.	$x^4 - 12x^2 + 36$ $(x^2 - 9)(x^2 - 4)$	1,36 2,18 3,12 4,9 6,6
16.	$x^4 + 6x^2 - 7$ DOTS $(x^2 + 7)(x^2 - 1)$ $(x^2 + 7)(x + 1)(x - 1)$	1,7

Mixed Practice: Remember to always look for __G.C.F__ factoring 1st!!!!

17. $\dfrac{9x^4}{x^2} - \dfrac{12x^3}{x^2} + \dfrac{4x^2}{x^2}$ G.C.F $x^2(9x^2 - 12x + 1)$	18. $\dfrac{x(x-8) + 7(x-8)}{x-8}$ G.C.F $(x-8)(x+7)$
19. $x^2 - 18x + 81$ Easy Tri $(x-9)(x-9)$	20. $25 - x^4$ DOTS $(5 + x^2)(5 - x^2)$
21. $x^2 - 7x + 10$ Easy Tri $(x-5)(x-2)$	22. $\dfrac{3x^2}{3x} + \dfrac{6x}{3x}$ G.C.F $3x(x+2)$
23. $25h^2 - 1$ D.O.T.S $(5h+1)(5h-1)$	24. $\dfrac{5x^2}{5} + \dfrac{20x}{5} + \dfrac{10}{5}$ $5(x^2 + 4x + 2)$
25. $\dfrac{y(2y+9) - 4(2y+9)}{2y+9}$ $(2y+9)(y-4)$	26. $x^{100} - 100$ DOTS $(x^{50} - 10)(x^{50} + 10)$
✳27. $\dfrac{5x^3}{5x} - \dfrac{20x^2}{5x} - \dfrac{60x}{5x}$ $5x(x^2 - 4x - 12)$ $5x(x-6)(x+2)$	28. $x^2 + 5x - 24$ $(x+8)(x-3)$