Algebra 1 PLC Planning Template

Week of: 4/13 - 4/17	Hi-Tech: Algebra 1	Lo-Tech: Algebra 1	No-Tech: Algebra 1
Tuesday **Lesson objective:** students will be able factor polynomials with a leading coefficient of 1 or greater than 1.	Watch the videos and complete the problems for Edpuzzle for your team. Edpuzzle (Team 8.2) **Edpuzzle** (Team 8.3) Join in on the **Zoom meeting** with your teacher to go over additional problems (look for a Canvas message with the Zoom conference link and time)	Watch the videos and complete the problems for Edpuzzle for your team. Edpuzzle (Team 8.2) **Edpuzzle** (Team 8.3) Join in on the **Zoom meeting** with your teacher to go over additional problems (look for a Canvas message with the Zoom conference link and time)	Complete the **Factoring Trinomials with a Leading Coefficient of 1 Worksheet**. Use the guided/modeled problems on the notes as your example. Work out each problem ==(you must show work)==. Show your work on a separate sheet of paper.(be sure to write your name on the document - for credit for the assignment)
Friday **Lesson objective:** students will be able factor polynomials with a leading coefficient of 1 or greater than 1.	1. Complete the Quizizz **(click on the link) Quizizz** 2. **Your score should be an 80% or higher. Practice again until your score reaches that mastery level (or above). Take a screenshot and upload your results** ==to Canvas (be sure to include your login name in the upper right hand corner of your ixl screen in the screenshot)== 3. **Respond to the error analysis problem in Canvas** ==(this assignment can be found in the ELearning Module)==	Complete the **Factoring Quadratics Maze**. Use the guided/modeled problems on the day 1 document as your example. Answer the **Error Analysis** problem/discussion. Work out each problem and answer the error analysis problem/discussion problem ==(you must show work)==. Show your work on a separate sheet of paper. **Use your phone to take a picture of your work and upload it to Canvas** (this assignment can be found in the E-learning module)**(be sure to write your name on the document - for credit for the assignment)**	Complete the **Factoring Quadratics Maze**. Use the guided/modeled problems on the day 1 document as your example. Answer the error analysis problem/discussion. Work out each problem and answer the error analysis problem/discussion problem ==(you must show work)==. Show your work on a separate sheet of paper. **(be sure to write your name on the document - for credit for the assignment)**

Factoring Trinomials with a leading Coefficient of 1

Example 1 – Factor: $x^2 + 9x + 20$

Step 1: Make sure that the trinomial is written in the correct order; the trinomial must be written in descending order from highest power to lowest power. In this case, the problem is in the correct order.	$x^2 + 9x + 20$
Step 2: Decide if the three terms have anything in common, called the greatest common factor or GCF. If so, factor out the GCF. Do not forget to include the GCF as part of your final answer. In this case, the three terms only have a 1 in common which is of no help.	$x^2 + 9x + 20$
Step 3: Multiply the leading coefficient and the constant, that is multiply the first and last numbers together. In this case, you should multiply 1 and 20.	$x^2 + 9x + 20$ 20
Step 4: List all of the factors from Step 3 and decide which combination of numbers will combine to get the number next to x. In this case, the numbers 4 and 5 can combine to equal 9.	20 1 20 2 10 4 5
Step 5: After choosing the correct pair of numbers, you must give each number a sign so that when they are combined they will equal the number next to x and also multiply to equal the number found in Step 3. In this case, +4 and +5 combine to equal +9 and +4 times +5 is 20.	$+4 + 5 = +9$ and $(+4)(+5) = 20$
Step 6: Rewrite the original problem with four terms by splitting the middle term into the two numbers chosen in step 5.	$x^2 + 4x + 5x + 20$
Step 7: Now that the problem is written with four terms, you can factor by grouping.	$x(x+4) + 5(x+4)$ $(x+4)(x+5)$

Write the factored form of each trinomial.

1. $x^2 + 7x + 10$

2. $x^2 + 13x + 30$

3. $x^2 + 12x + 32$

4. $x^2 - 8x + 15$

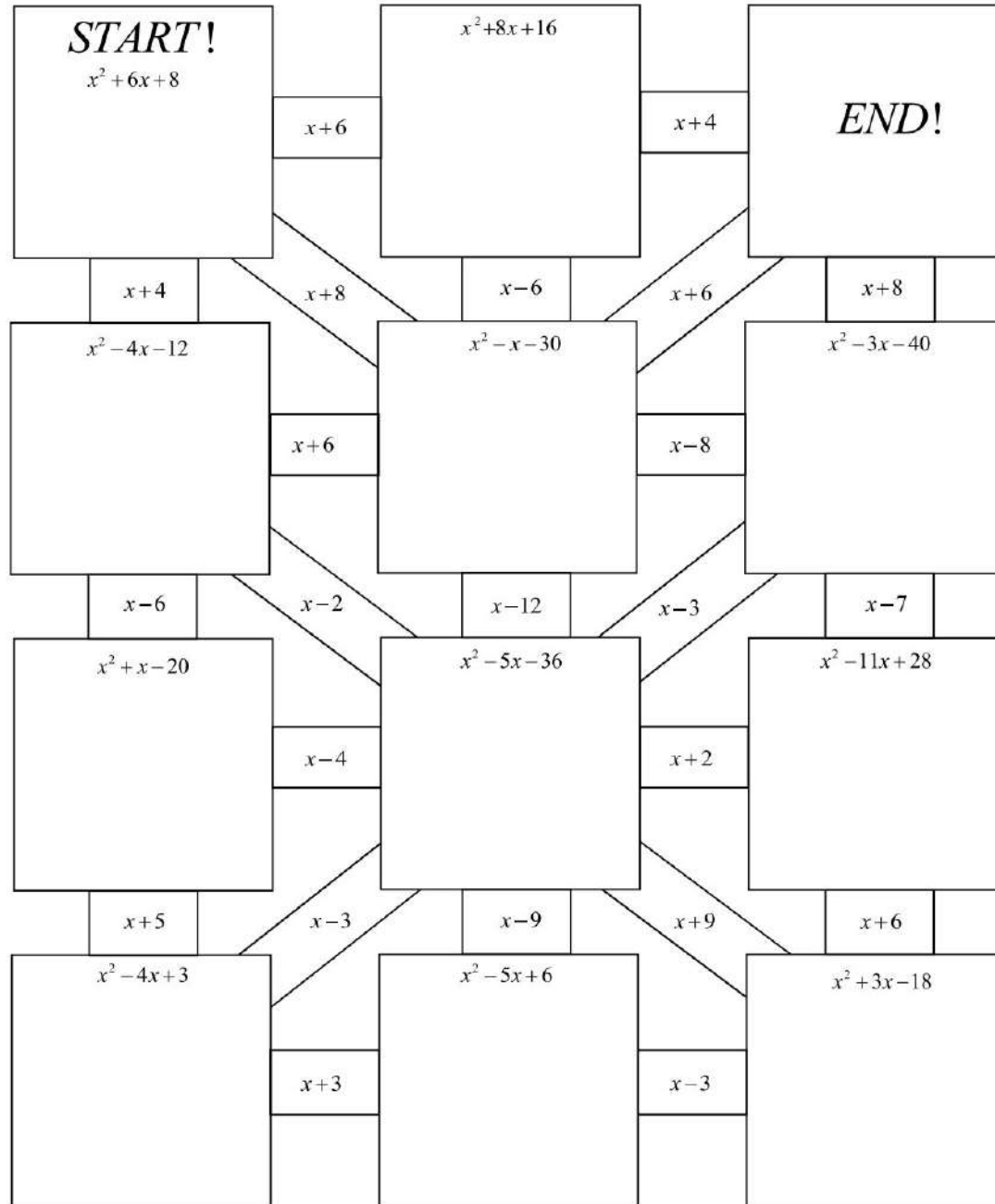5. $x^2 - 14x + 45$

6. $x^2 - 17x + 52$

7. $x^2 + 9x - 10$

8. $x^2 + x - 42$

9. $x^2 - 4x - 60$

Factoring Maze 1

Factor each expression below. Then use one factor to navigate through the maze.

START! x^2+6x+8		$x^2+8x+16$		END!
	$x+6$		$x+4$	
$x+4$	$x+8$	$x-6$	$x+6$	$x+8$
$x^2-4x-12$		x^2-x-30		$x^2-3x-40$
	$x+6$		$x-8$	
$x-6$	$x-2$	$x-12$	$x-3$	$x-7$
x^2+x-20		$x^2-5x-36$		$x^2-11x+28$
	$x-4$		$x+2$	
$x+5$	$x-3$	$x-9$	$x+9$	$x+6$
x^2-4x+3		x^2-5x+6		$x^2+3x-18$
	$x+3$		$x-3$	

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Factoring Polynomials: Error Analysis Problem

Describe and correct the error a student made in making a table to factor the trinomial $x^2 - 11x - 26$.

Factors	Sum of Factors
−1 and 11	10
1 and −11	−10

The trinomial $x^2 - 11x - 26$ is not factorable because no factors of b sum to c.

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