

Name: _____ Date: _____ Period: _____

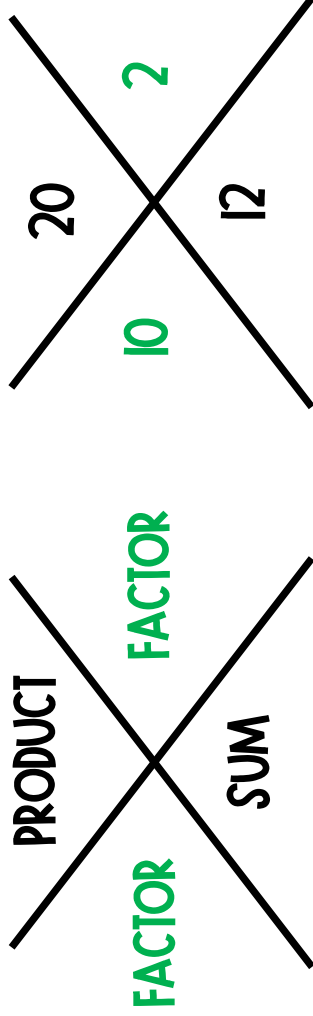
NOTES: FACTOR A BASIC TRINOMIAL *Day 1*

When we factor a trinomial, we need to be able to find two numbers that satisfy two requirements. They must add or subtract to equal a specific number **AND** they must multiply to equal a specific number. Today, we will practice finding these factors.

Find Factors

Part 1

Ex. Product, Sum = 20, 12



In part 1, find factors of the first number that add to equal the second number.

1. 72, 17

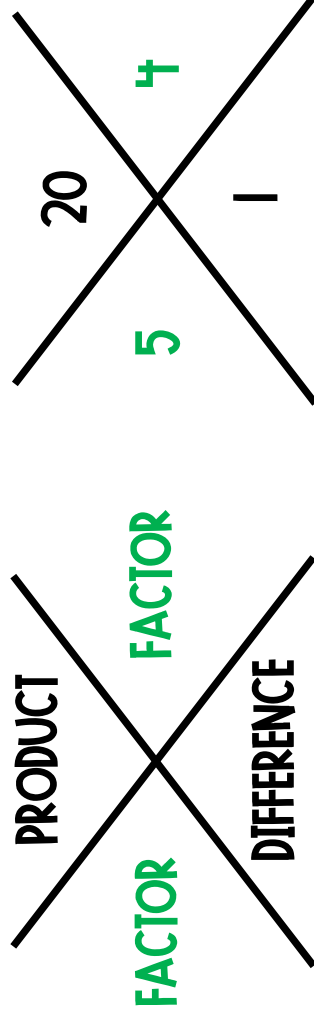
2. 24, 10

3. 15, 16

Find Factors

Part 2

Ex. Product, Difference = 20, 1



In part 2, find factors of the first number that subtract to equal the second number.

4. 50, 5

5. 36, 16

6. 100, 21

Find Factors whose product is ac and sum is b

Part
3

~~ac~~
FACTOR

FACTOR
~~b~~

$$ax^2 + bx + c$$

$$3x^2 + 4x + 1$$

$$a=3 \quad b=4 \quad c=1$$

In part 3, find factors of ac that have a sum of b . Pay attention to your integer rules!

7. $2x^2 + 7x + 5$

8. $3x^2 - 16x + 5$

9. $x^2 - x - 20$

10. $3x^2 + 2x - 8$

11. $4x^2 - 4x - 1$

12. $x^2 - 7x + 12$

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A. FACTOR A BASIC TRINOMIAL

Finding Factors

Day 1

Find factors of the first number that add to the second number. Refer to Part 1 of your notes.

1. 36, 12	2. 24, 14	3. 35, 12
4. 48, 19	5. 100, 25	6. 36, 13

Find factors of the first number that subtract to the second number. Refer to Part 2 of your notes.

7. 50, 5	8. 28, 3	9. 20, 1
10. 45, 4	11. 64, 12	12. 85, 12

Find factors of "ac" that have a sum of "b." Refer to Part 3 of your notes.

13. $2x^2 + 3x - 9$

14. $3x^2 - 2x - 5$

15. $5x^2 - 18x + 9$

16. $4x^2 - 17x + 4$

17. $6x^2 + 5x - 6$

18. $x^2 + 2x + 1$

19. $5x^2 + 7x + 2$

20. $-6x^2 - 25x - 25$

21. $x^2 - 9x + 14$

22. $4x^2 - 4x + 1$

23. $32x^2 + 20x - 3$

24. $4x^2 - 5x - 6$