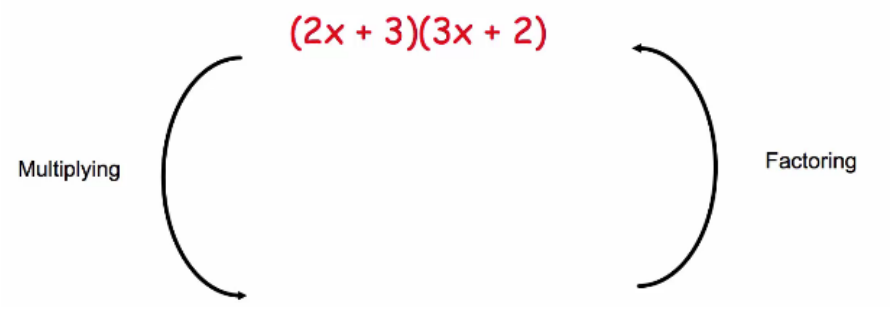
11.4 Factoring Trinomials

NOTES

Write your questions here!

Meaning of Greek & Latin Prefixes	*Examples in our English Language*
Mono -	Monologue, Monorail
Bi -	Bicycle, Bilingual
Tri -	Tricycle, Triangle, Tripod
Poly – "Many"	

Types of Polynomials	Examples	# of Terms
Monomial: number, variable, or product of number(s) and/or variable(s)		
Binomial: sum/difference of two monomials		
Trinomial: sum/difference of three monomials		



- You can use factoring to write a trinomial as a product of binomials

Question 1 Factor expressions in the form $x^2 + bx + c$

(a) $x^2 + 14x + 48$ (b) $x^2 - 9x - 5$

Question 1 Factor expressions in the form $ax^2 + bx + c$

(a) $3x^2 - 10x + 8$ (b) $6x^2 + x - 15$

Write your questions here!

Key Term

Difference of Two Squares:

$a^2 - b^2 =$

Perfect Square Trinomial:

$a^2 + 2ab + b^2 =$

$a^2 - 2ab + b^2 =$

Question 2

Factor expressions in the form $x^2 + bx + c$

(a) $x^2 - 121$

(b) $m^2 + 14m + 49$

(c) $x^2 - 24x + 144$

Question 2

Factor expressions in the form $ax^2 + bx + c$

(a) $81x^2 - 25$

(b) $49z^2 + 112z + 64$

(c) $9r^2 - 66p + 121$

Summary:

Now, mmarize ur notes here!

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PRACTICE

1. Explain the difference between a monomial, a binomial, and a trinomial. Give an example of each type of expression.

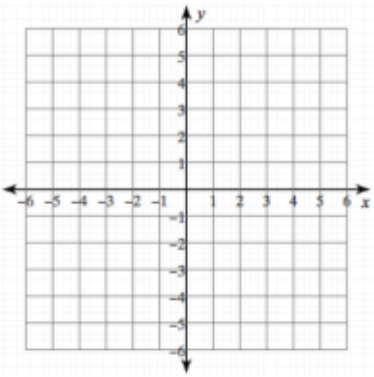
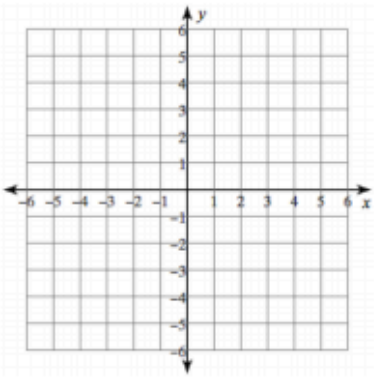
Factor the expression in the form x^2+bx+c. *If the expression cannot be factored, say so.*		
2. x^2+6x+5	3. $x^2-7x+10$	4. $a^2-13a+22$
5. $r^2+15r+56$	6. $b^2-3b-40$	7. p^2+2p+4
8. $m^2+8m-65$	9. $x^2+9x-36$	10. $c^2-9c-18$

Factor the expression in the form ax^2+bx+c. *If the expression cannot be factored, say so.*		
11. $2x^2+5x+3$	12. $6p^2+5p+1$	13. $3n^2+7n+4$
14. $4y^2-5y-4$	15. $5x^2+14x-3$	16. $15x^2-2x-8$
17. $11z^2+2z-9$	18. $9d^2-13d-10$	19. $14m^2+m-3$

Factor the expression. *Special Patterns*

20. $b^2 - 81$	21. $z^2 - 121$	22. $x^2 + 8x + 16$
23. $t^2 - 16t + 64$	24. $s^2 - 26s + 169$	25. $n^2 + 14n + 49$
26. $9x^2 - 1$	27. $4r^2 - 25$	28. $64w^2 + 144w + 81$
29. $25t^2 - 30t + 9$	30. $36x^2 - 84x + 49$	31. $49x^2 + 70x + 25$

Factor the expression. *Mixed Review*		
32. $q^2 - 11q + 28$	33. $x^2 - 36$	34. $c^2 + 28c + 196$
35. $4m^2 + 16m + 15$	36. $x^2 - 7x - 18$	37. $x^2 - 4x - 12$
38. $49n^2 - 16$	39. $16s^2 + 8s + 1$	40. $9p^2 - 12p + 4$

SKILLZ REVIEW		
Graph.	List all pairs of numbers that multiply to the given number.	Which number pair contains the largest perfect square?
1) x = -4 	2) 80	3) Use 80
4) 4x – 5y = 10 	5) 75	6) Use 75

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APPLICATION

1) Factor the trinomial

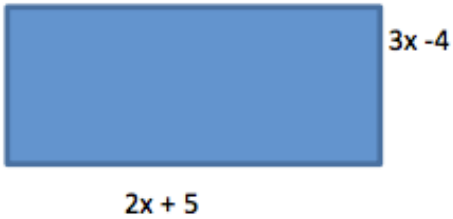
$n^2 + 2n - 48$

2) Factor the trinomial

$2b^2 + 9b + 9$

Directions: For number 3 and 4 remember Area = base x height

3) Find the area in terms of x.



4) Find the base and height in terms of x.

Area = $2x^2 - 5x - 12$