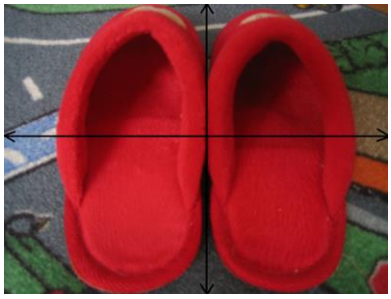

Ready, Set, Go!

Ready

Topic: Multiplying binomials using a two-way table.

Multiply the following binomials using the given two-way table to assist you.

Example:

Multiply $(2x + 3)(5x - 7)$

$(2x+3)$ \ $(5x-7)$	
$10x^2$	$-14x$
$+15x$	-21

$= 10x^2 + x - 21$

1. $(3x - 4)(7x - 5)$

2. $(9x + 2)(x + 6)$

3. $(4x - 3)(3x + 11)$

4. $(7x + 3)(7x - 3)$

5. $(3x - 10)(3x + 10)$

6. $(11x + 5)(11x - 5)$

7. $(4x + 5)^2$

8. $(x + 9)^2$

9. $(10x - 7)^2$

10. What do you notice in the "like-term" boxes in #'s 7, 8, and 9 that is different from the other problems?

Set Topic: Factored form of a quadratic function

Given the **factored form** of a quadratic function, identify the vertex, intercepts, and vertical stretch of the parabola.

11. $y = 4(x-2)(x+6)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

12. $y = -3(x+2)(x-6)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

13. $y = (x+5)(x+7)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

14. $y = \frac{1}{2}(x-7)(x-7)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

15. $y = -\frac{1}{2}(x-8)(x+4)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

16. $y = \frac{3}{5}(x-25)(x-9)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

17. $y = \frac{3}{4}(x-3)(x+3)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

18. $y = -(x-5)(x+5)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

19. $y = \frac{2}{3}(x+10)(x+10)$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

Go

Topic: Vertex form of a quadratic function

Given the **vertex form** of a quadratic function, identify the vertex, intercepts, and vertical stretch of the parabola.

20. $y = (x+2)^2 - 4$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

21. $y = -3(x+6)^2 + 3$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

22. $y = 2(x-1)^2 - 8$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

23. $y = 4(x+2)^2 - 64$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

24. $y = -3(x-2)^2 + 48$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

25. $y = (x+6)^2 - 1$

v:_____

x-inter(s) _____

y-inter _____

stretch _____

26. Did you notice that the parabolas in problems 11, 12, & 13 are the same as the ones in problems 23, 24, & 25 respectively? If you didn't, go back and compare the answers in problems 11, 12, & 13 and problems 23, 24, & 25.

Prove that a. $4(x-2)(x+6) = 4(x+2)^2 - 64$

b. $-3(x+2)(x-6) = -3(x-2)^2 + 48$

c. $(x+5)(x+7) = (x+6)^2 - 1$