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| \*Learning Target: |
| \*Critical Content: |

Remember: Binomials -

To multiply binomials, we \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A shortcut of the distributive property is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

F\_\_\_\_\_\_ O\_\_\_\_\_\_\_\_\_ I\_\_\_\_\_\_\_\_\_\_ L\_\_\_\_\_\_\_\_\_

Ex1a: $(2x+3)(x+5)$ Ex1b: $(x-2)(3x+4)$

Ex2a: $(2y-7)(3y+5)$ Ex2b: $(4a-5)(2a-9)$

-When we multiply two linear expressions, we get a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Quadratic expression-

Ex: A contractor is building a deck around a rectangular swimming pool. The deck is x feet from every side of the pool. Write an expression for the total area of the pool and deck.

\*We can also multiply polynomials – use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Ex: $(6x+5)(2x^{2}-3x-5)$ Ex: $(2y^{2}+3y-1)(3y^{2}-5y+2)$

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| **Find each product.** |
| 1) $(3c-5)(c+3)$ | 2) $\left(6a+5\right)\left(5a+3\right)$ | 3) $\left(5y-4\right)\left(3y-1\right)$ | 4) $(3m+5)(2m+3)$ |
| 5) $(12t-5)(12t+5)$ | 6) $\left(8w+4x\right)\left(5w-6x\right)$ | 7) $\left(g+10\right)\left(2g-5\right)$ | 8) $(6d-5)(4d-7)$ |
| 9) $(4a+7)(9a^{2}+2a-7)$ | 10) $(2y-11)(y^{2}-3y+2)$ |
| 11) $(x^{2}+5x-1)(5x^{2}-6x+1)$ | 12) $\left(6z^{2}-5z-2\right)\left(3z^{3}-2z-4\right)$ |
| 13) $\left(m+2\right)[\left(m^{2}+2m-6\right)+\left(m^{2}-2m+4\right)]$ |
| 14) The dimensions of a sand volleyball court are represented by a width of $6y-5$ feet and a length of $3y+4$ feet.  |
| a) Write an expression that represents the area of the court. |
| b) If y = 9, find the area of the volleyball court. |