

Name: Maricel Jurado

Date: _____

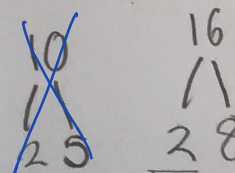
Learning Goal 3.3	Factor trinomials of the form $ax^2 + bx + c$.
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Daily Check In

Without a calculator, fully factor the trinomial into a product of 2 binomials. Show as much work as you can so I can understand your process!

$x^2 + 10x + 16$



$x^2 + 8x + 2x + 16$
 $x(x + 8) + 2(x + 8)$

$(x + 8)(x + 2)$



Superb!!

How did you do? (Circle one)	Emerging 	Developing 	Proficient 	Extending
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Name: _____

Date: _____

Bobby.V

Learning Goal 3.3

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Daily Check In

Without a calculator, fully factor the trinomial into a product of 2 binomials. Show as much work as you can so I can understand your process!

$$x^2 + 8x + 15$$





1 15
3 5

$$3 \times 5 = 15 \quad \checkmark$$

$$3 * 5 = 8$$

$$(x+3)(x+5) \quad \checkmark$$

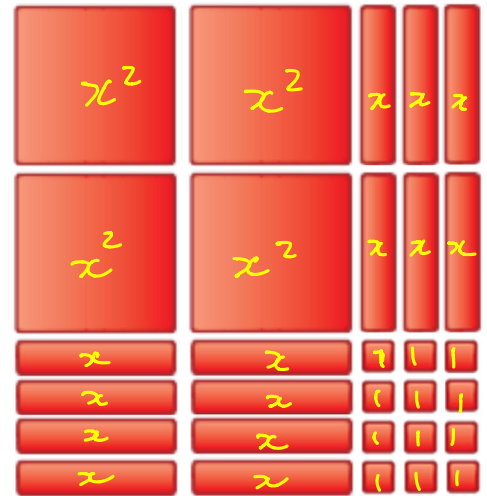
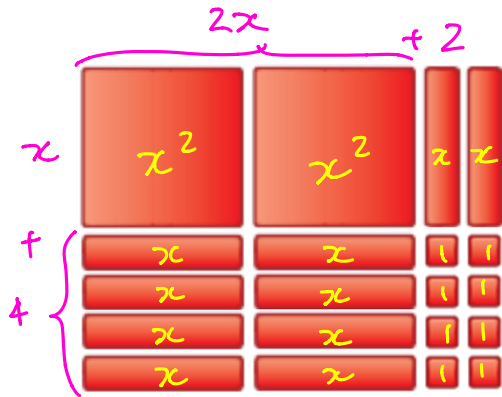
Nice Work!!

How did you do? (Circle one)	Emerging 	Developing 	Proficient 	Extending 
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Trinomial : $2x^2 + 10x + 8$
 $= 2(x^2 + 5x + 4)$
 $= 2(x+4)(x+1)$

Binomial Product : $(x+4)(2x+2)$
 Factored.
 $= 2(x+4)(x+1)$
 Fully factored.

$4x^2 + 14x + 12$
 $= 2(2x^2 + 7x + 6)$
 $(2x+4)(2x+3)$
 $= 2(x+2)(2x+3)$
 Fully factored

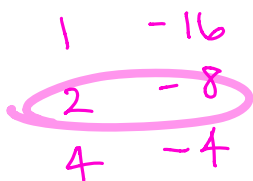
But again, you cannot use this model forever.

- when $a \neq 1$, this does not work well
- negatives are messy
- negative area doesn't mean anything

Example Factor the following expression. Expand your answer to check your work.

1. $2x^2 - 6x - 8$

$\frac{-8}{-8} \times \frac{2}{2} = 2x - 8 = -16$
 $\frac{-8}{-8} + \frac{2}{2} = -6$



$= 2x^2 - 8x + 2x - 8$
 $= 2x(x-4) + 2(x-4)$
 $= (x-4)(2x+2)$
 $= 2(x-4)(x+1)$

$= 2(x^2 - 3x - 4)$

$$= 2(x-4)(x+1)$$

$$ax^2 + bx + c$$

$$\begin{aligned} \frac{-1}{-1} \times \frac{-3}{-3} &= 3 \times 1 \\ \frac{-1}{-1} + \frac{-3}{-3} &= -4 \end{aligned}$$

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

$$\begin{aligned} &= 3x^2 - x - 3x + 1 \\ &= x(3x-1) - 1(3x-1) \\ &= (3x-1)(x-1) \end{aligned}$$

4. $4m^2 + 4m - 3$

6. $6q^2 - 7q - 3$

8. $3m^2 + 10mn - 8n^2$

$$\begin{aligned} \frac{5}{5} \times \frac{2}{2} &= 5 \times 2 = 10 \\ \frac{5}{5} + \frac{2}{2} &= 7 \end{aligned}$$

3. $5z^2 + 7z + 2$

$$\begin{aligned} &= 5z^2 + 5z + 2z + 2 \\ &= 5z(z+1) + 2(z+1) \\ &= (z+1)(5z+2) \end{aligned}$$

5. $3a^2 + 26a - 9$

7. $2p^2 + 3p - 9$

9. $4r^4 + 20r^2t^2 + 25t^4$