

Review: All 3 Forms

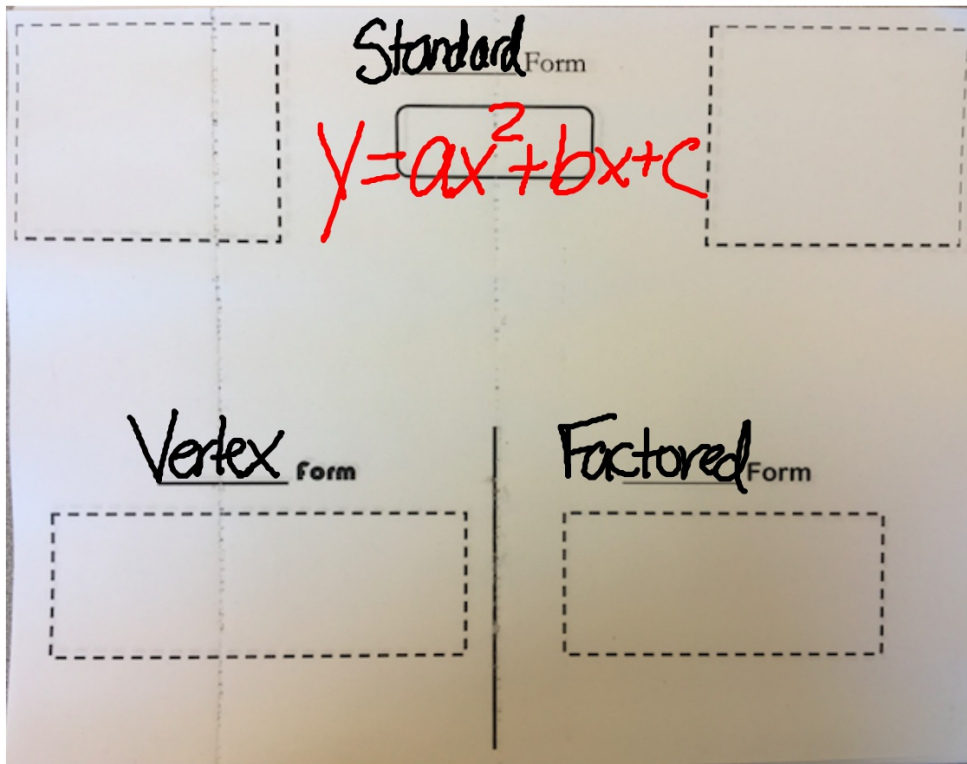
Standard Form: $y = ax^2 + bx + c$

Vertex Form: $y = a(x-h)^2 + k$

Factored Form: $y = (x-m)(x-n)$

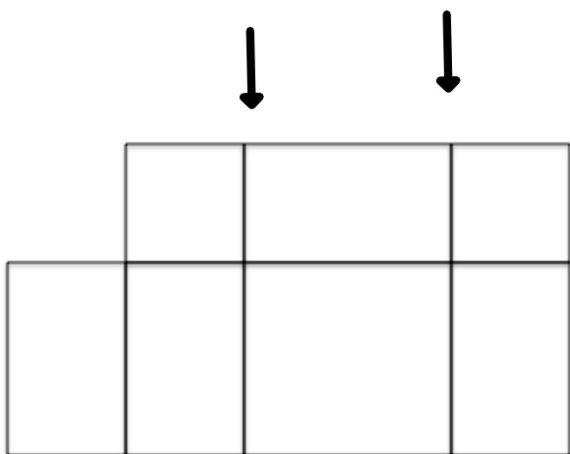
3 Forms Placemat

#1 Let's label our three different forms

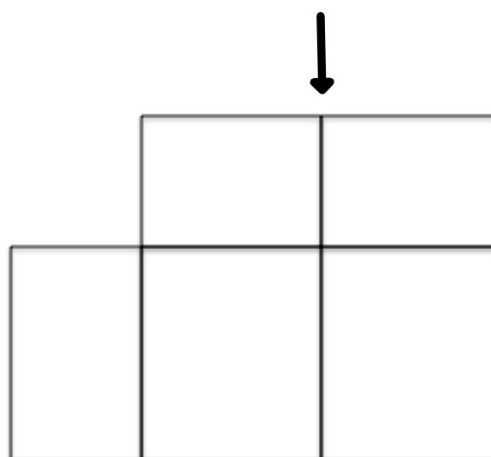


#2 Cut out the green and pink tables so that you can create flaps

****CUT HERE FOR FLAPS****



Glue green down under vertex form



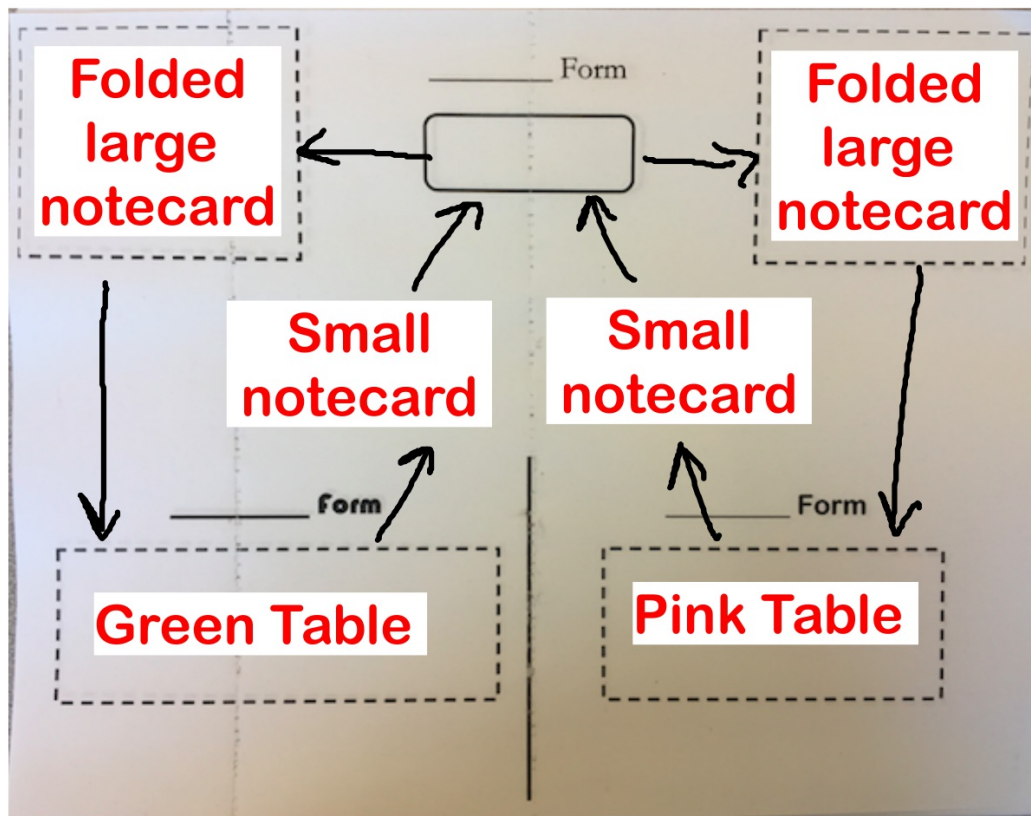
Glue pink down under factored form

#3 Take your two large index cards and fold them in half

#4 You will glue them down on either side of standard form in the dotted boxes

#5 Cut the small index card and cut it in half

#6 You will glue these down right above the vertex and factored form, so you have flaps



Vertex Form

$$a \cdot (x-h)^2 + k$$

-2	$(x+4)^2$	-6
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$y =$	Reflet over x Stretch by 2	Translate left 4	Translate down 6
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- Tells us all transformations
- Vertex at (h, k) *h is opposite
- Does NOT tell us intercepts

Factored Form

$$(x-m)(x-n)$$

$(x-4)$	$(x+5)$
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$y =$	X-intercept @ (4, 0)	X-intercept @ (-5, 0)
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- Tells us all intercepts
- Y-intercept is $m \cdot n$
- Does NOT tell us transformations

Going Between Vertex Form & Standard Form

Complete
the
Square

- Multiply $(x-h)(x-k)$
- Distribute a
- Combine with K

$$\begin{aligned}(x+4)(x+4) &= x^2 + 8x + 16 \\ -2(x^2 + 8x + 16) &= -2x^2 - 16x - 32 \\ -2x^2 - 16x - 32 - 6 &= -2x^2 - 16x - 38\end{aligned}$$