## Graphing Quadratics - Standard Form

Quadratic Form: $\qquad$
'a' makes the graph $\qquad$ , neg. 'a' opens $\qquad$ and pos. 'a' opens $\qquad$ .

Squared makes it graph as $\qquad$ named a $\qquad$ function.
'c' $\qquad$ the graph a number of units.
'A of S' means $\qquad$ .

To find the vertex you must use the formula:

Which is now the $x$ in the vertex $(x, y)$.

To find the $y$-intercept we find the value of $\qquad$ .

Steps to Graph a Quadratic in Std Form

1. Find $\qquad$
2. Use "x" and plug in to quadratic to find $\qquad$
3. Plot both
4. Choose two $x$-values to use to find $\qquad$ .
5. Plot

Ex1. $y=x^{2}+6 x+6$

| Vertex |  |
| :---: | :---: |
| Max/Min Value |  |
| AOS |  |
| Zero(s) |  |
| Opens |  |
| y-intercept |  |
| Domain |  |
| Range |  |



Ex. 2) $y=2 x^{2}-12 x+17$

| Vertex |  |
| :---: | :---: |
| Max/Min Value |  |
| AOS |  |
| Zero(s) |  |
| Opens |  |
| $y$-intercept |  |
| Domain |  |
| Range |  |



Ex 3) $y=\frac{1}{2} x^{2}-2 x+6$

| Vertex |  |
| :---: | :--- |
| Max/Min Value |  |
| AOS |  |
| Zero(s) |  |
| Opens |  |
| $y$-intercept |  |
| Domain |  |
| Range |  |



