**Use the quadratic equation to find VERTEX, AXIS OF SYMMETRY, and Y-INTERCEPT.**

1) $y=x^{2}-4x+7$ 2) $y=2x^{2}-4x-1$

3) $y=-2x^{2}+16x-35$ 4) $y=-x^{2}-6x-10$

**SKETCH the following quadratic functions from vertex form. (only need 1 point, like foldable)**

5) $f\left(x\right)=-\left(x-3\right)^{2}+2$ 6) $y= \left(x+1\right)^{2}+2$ 7) $h\left(x\right)= (x-4)^{2}$



**Write the equation that corresponds to the graph in VERTEX FORM.**

8) 9) 10)

**Convert the standard form equation into VERTEX FORM.**

11) $y=x^{2}+2x-1$ 12) $y=x^{2}-4x+3$

13) $y=x^{2}+6x+7$ 14) $y=x^{2}-8x+17$

**Use the graphs to identify the ZEROS and the INTERVALS.** *(Remember: intervals are x-values only!)*

15) Positive & Increasing 16) Negative & Increasing



 Interval: Interval:

 Zeros: Zeros:

17) Negative & Decreasing 18) Negative & Decreasing

 Interval: Interval:

 Zeros: Zeros: