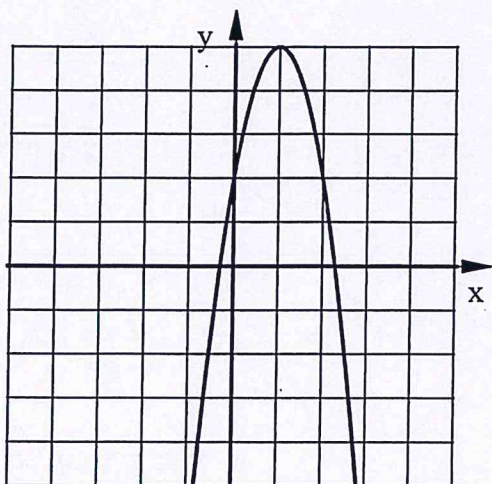
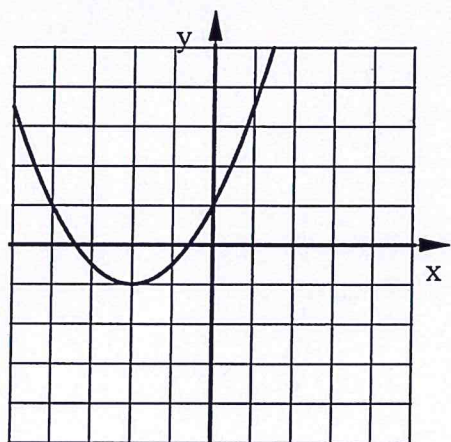


Write the equation of each quadratic in Vertex Form: $y = a(x - h)^2 + k$

1.

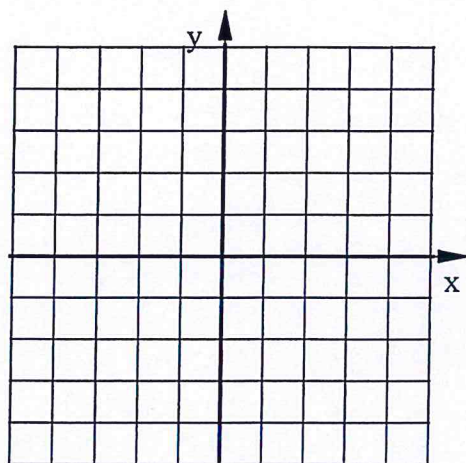


2.



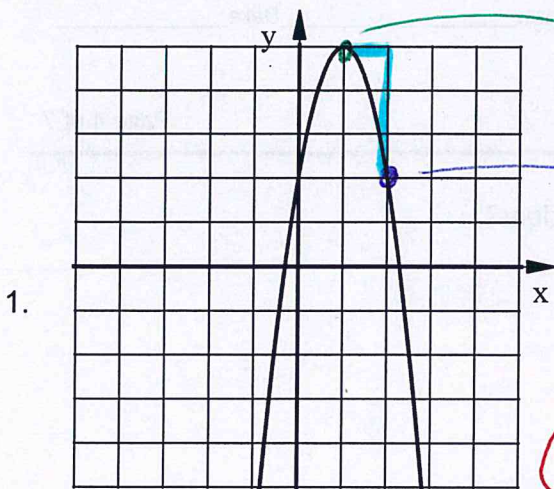
3. Graph this transformation of the Parent Quadratic using the five main points:

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



Write the equation of each quadratic in Vertex Form: $y = a(x - h)^2 + k$

ANSWERS



VERTEX: (1, 5)

$$\begin{cases} h=1 \\ k=5 \end{cases}$$

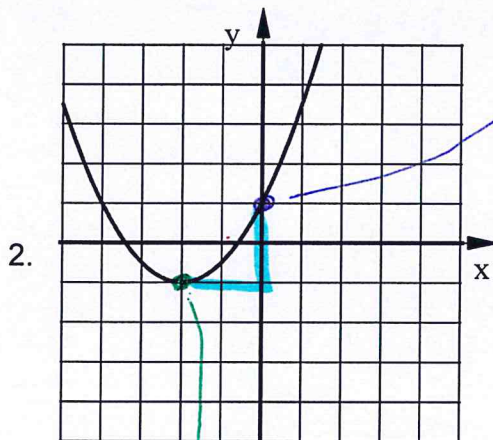
FIRST GOOD PT TO RIGHT } ON PARENT FUNCTION

$$\begin{cases} 1 \\ 3 \end{cases}$$

$$\begin{cases} 1 \\ 1 \end{cases}$$

3 TIMES TALLER & UPSIDE DOWN $a = -3$

$$y = -3(x - 1)^2 + 5$$



FIRST GOOD PT TO RIGHT

ON PARENT FUNCTION

$$\begin{cases} 2 \\ 2 \end{cases}$$

$$\begin{cases} 2 \\ 4 \end{cases}$$

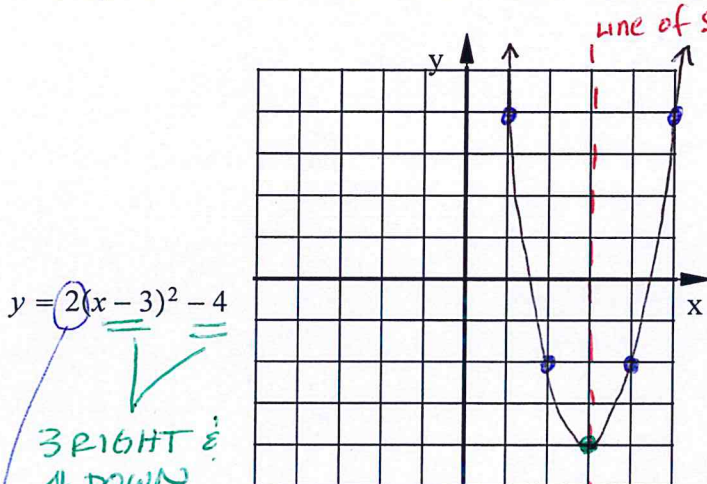
HALF AS TALL STILL OPENS UP

$$a = \frac{1}{2}$$

$$y = \frac{1}{2}(x + 2)^2 - 1$$

Vertex (-2, -1) → 2 Left 1 down

3. Graph this transformation of the Parent Quadratic using the five main points:



3 RIGHT & 4 DOWN

VERTEX: (3, -4)

TWICE AS TALL

1ST PT

$$\begin{cases} 1 \\ 1 \end{cases} \times 2 \text{ becomes } \begin{cases} 1 \\ 2 \end{cases}$$

2ND PT

$$\begin{cases} 2 \\ 4 \end{cases} \times 2 \text{ becomes } \begin{cases} 2 \\ 8 \end{cases}$$