Name: _____   period:_____   number _____

Happy Face design
Function Art Practice

In order to graph function faces, we are going to have to **restrict the domain.** To do this, after each function we draw, we need to specify between which *x*-values we want the function to exist. Then we would be able to find the **restricted range** based on our domain. The **Anchor point** is the point in which the parent (0,0) has shifted to (it's the new vertex). **DIRECTIONS:** fill out table below based on the given descriptions then graph HAPPY FACE Please label left and right endpoints and the anchor point of all the functions on the graph. Please snap a picture, email or turn in digitally on google classroom by Thursday, Apr 30th.

1. HF's nose is a cubic function shifts right 2 and up 4
    It should only be graphed between the x-values of 1 and 3

2. HF's top right side of mouth is square root function shifts right 2
    It should only be graphed between the x-values of 2 and 6

3. HF's top left side of mouth is square root function flips over y axis (hint: you need to put the neg inside the root to flip over y axis), and right 2
    It should only be graphed between the x-values of -2 and 2

4. HF's bottom of mouth is absolute value function shifts right 2 and down 2
    It should only be graphed between the x-values of -2 and 6

5. HF's left brow is horizontal line at 10
    It should only be graphed between the x-values of -3 and 1

6. HF's right brow is horizontal line at 10
    It should only be graphed between the x-values of 3 and 7

7. HF's right eye is a quadratic function shifts right 5 and up 5
    It should only be graphed between the x-values of 3 and 7

8. HF's left eye is quadratic function shifts left 1 and up 5
    It should only be graphed between the x-values of -3 and 1

#	Function equation	Left endpoint Right endpoint	Anchor Point	Domain	Range	Where
1		( )( )	( )			nose
2		( )( )	( )			Top Rt mouth

3		( ) ( )	( )			Top Lt mouth
4		( ) ( )	( )			Bottom mouth
5		( ) ( )	( )			Left Brow
6		( ) ( )	( )			Right brow
7		( ) ( )	( )			Right eye
8		( ) ( )	( )			Left eye