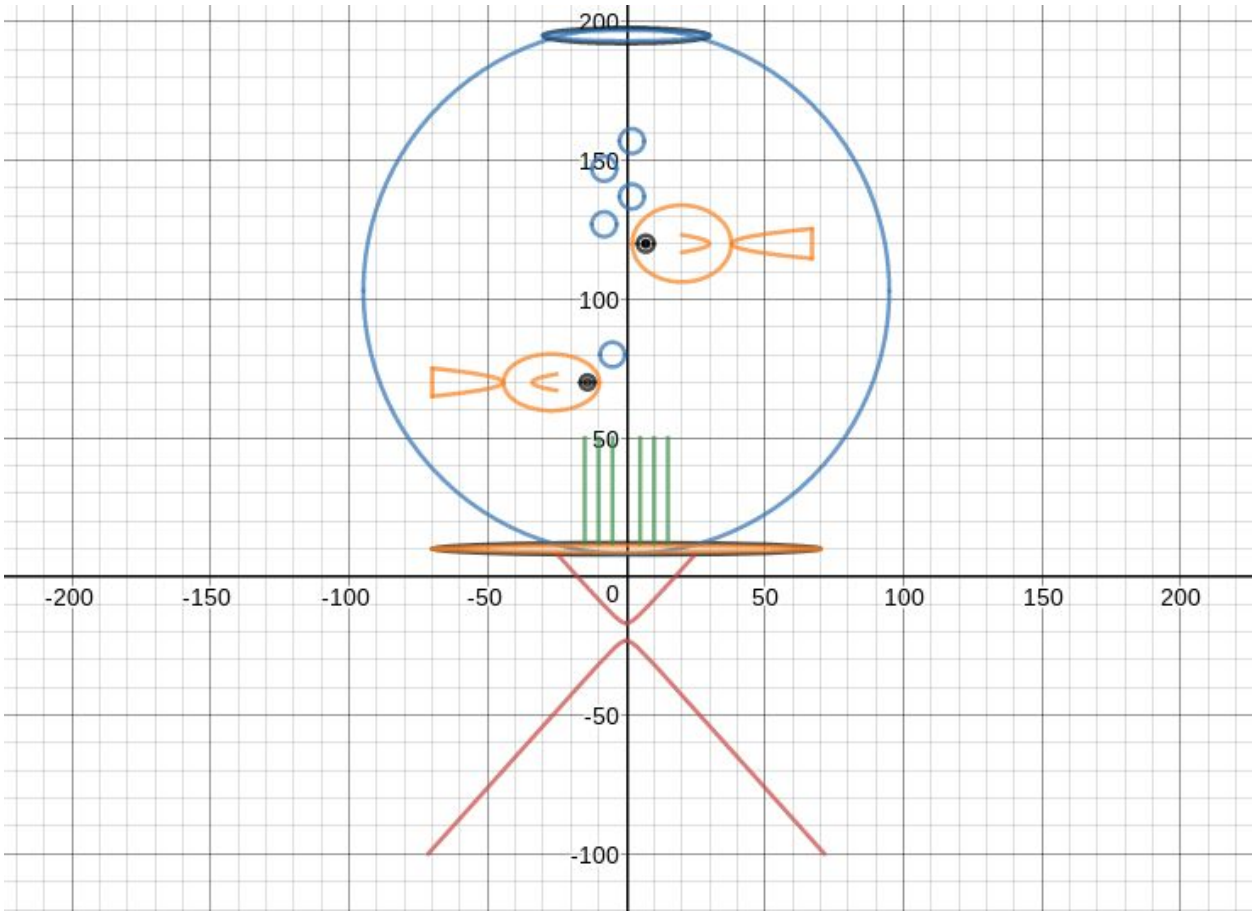
Saamir Baker Algebra 2 BM

Fish Bowl Graph



Introduction

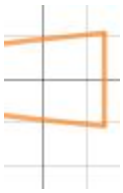
When I first started this project, I sat down in class and thought “Why me?” This project was very well going to be the death of me, until I realized it was more tedious than it was hard. My first step was thinking of a theme that would be easy to create with my group. It took us a few days but we knew aquatic life was the way to go. Then after looking at my grade, I knew I needed to do as much work as possible to get an A on this benchmark. So here it is, all it took was 1000 tears to do it.

Lines

My graph consists of eight lines, let's take a look at them!

Line #1: 

Equation: x=-70

Line #2: 

Equation: x=67

Line #3: 

Equation: x=-15

Line #4:

Equation: x=-10

Line #5:

Equation: x=-5

Line #6:

Equation: x=5

Line #7:

Equation: x=10

Line #8:

Equation: x=15

All of the slopes to my lines in this graph are undefined.

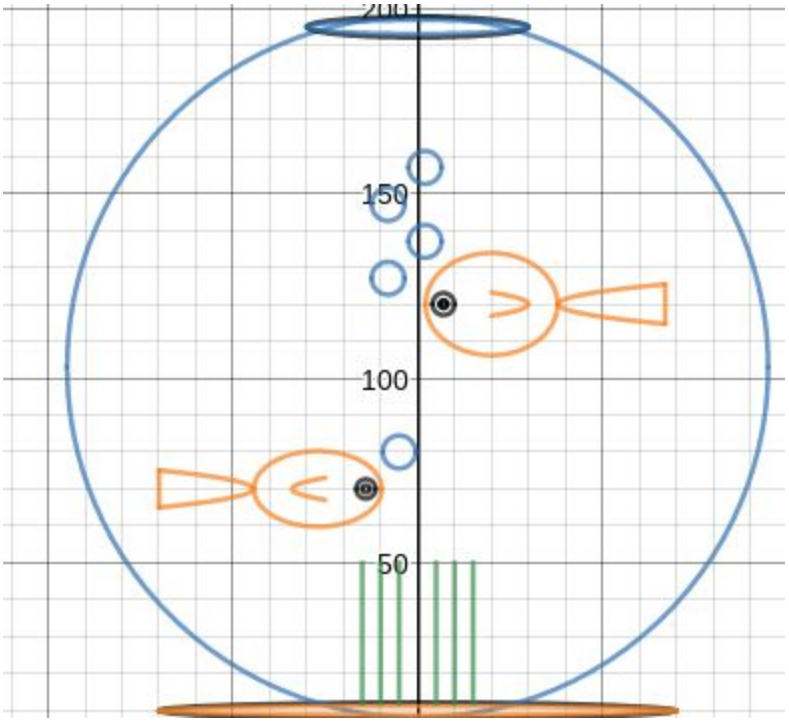
Circles

The ten circles in my graph are fin flapping tastic!

Standard equation for circles:

$$(x-h)^2+(y-k)^2=r^2$$

Circle #1:

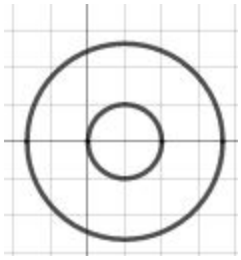


The Equation	The Center	The Radius
$(x-0)^2+(y-103)^2=9000$	(0, -103)	$\sqrt{9000}$

Circle #2:

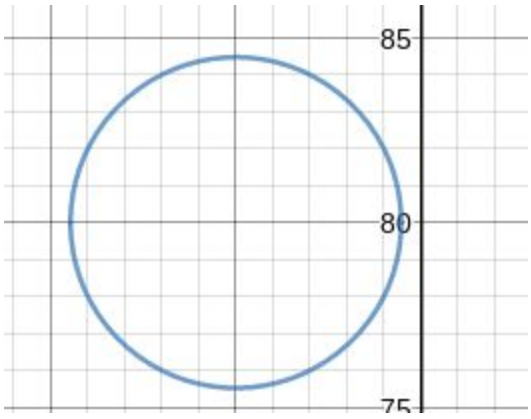
The Equation	The Center	The Radius
$(x+14)^2+(y-70)^2=1$	(-14, 70)	1

Circle #3:



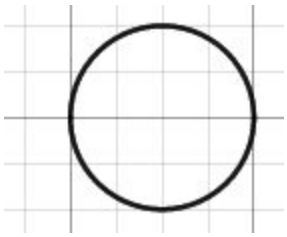
The Equation	The Center	The Radius
(x+14)^2+(y-70)^2=7	(-14, 70)	$\sqrt{7}$

Circle #4:



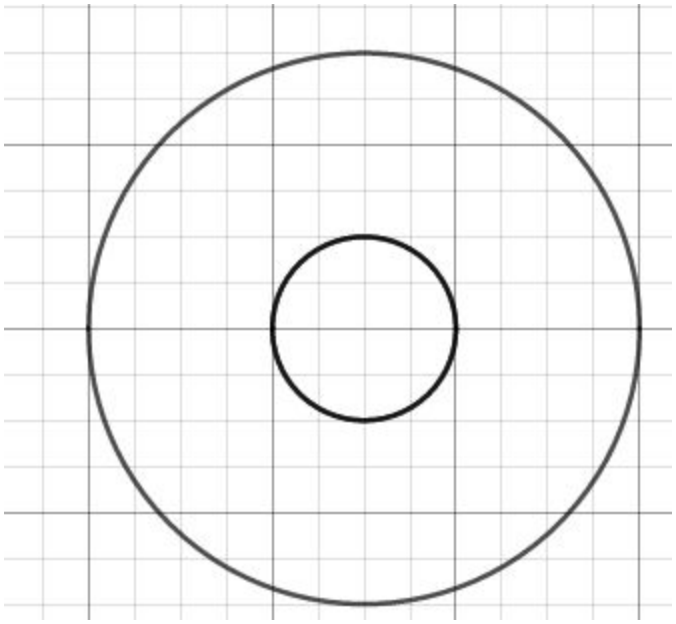
The Equation	The Center	The Radius
$(x+5)^2+(y-80)^2=20$	(-5, 80)	$\sqrt{20}$

Circle #5:



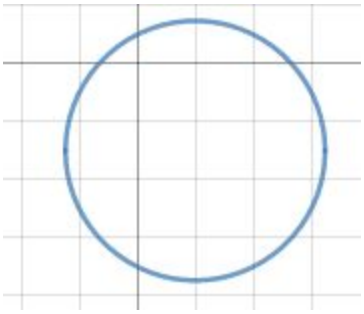
The Equation	The Center	The Radius
$(x-7)^2+(y-120)^2=1$	(7, 120)	1

Circle #6:



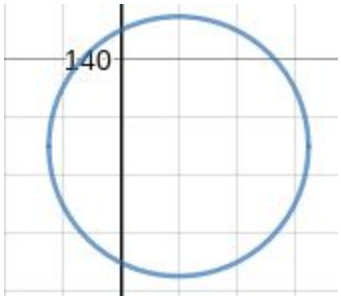
The Equation	The Center	The Radius
$(x-7)^2+(y-120)^2=9$	(7, 120)	$\sqrt{9}$

Circle #7:



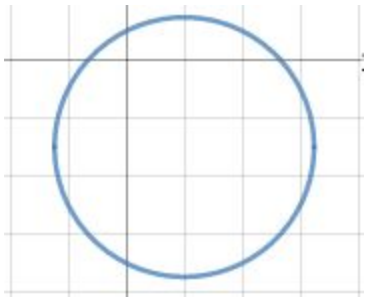
The Equation	The Center	The Radius
$(x+8)^2+(y-127)^2=20$	(-8, 127)	$\sqrt{20}$

Circle #8:



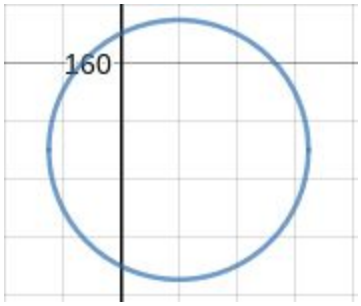
The Equation	The Center	The Radius
$(x-2)^2+(y-137)^2=20$	(2, 137)	$\sqrt{20}$

Circle #9:



The Equation	The Center	The Radius
$(x+8)^2+(y-147)^2=20$		

Circle #10:



The Equation	The Center	The Radius
$(x-2)^2+(y-157)^2=20$	(2, 157)	$\sqrt{20}$

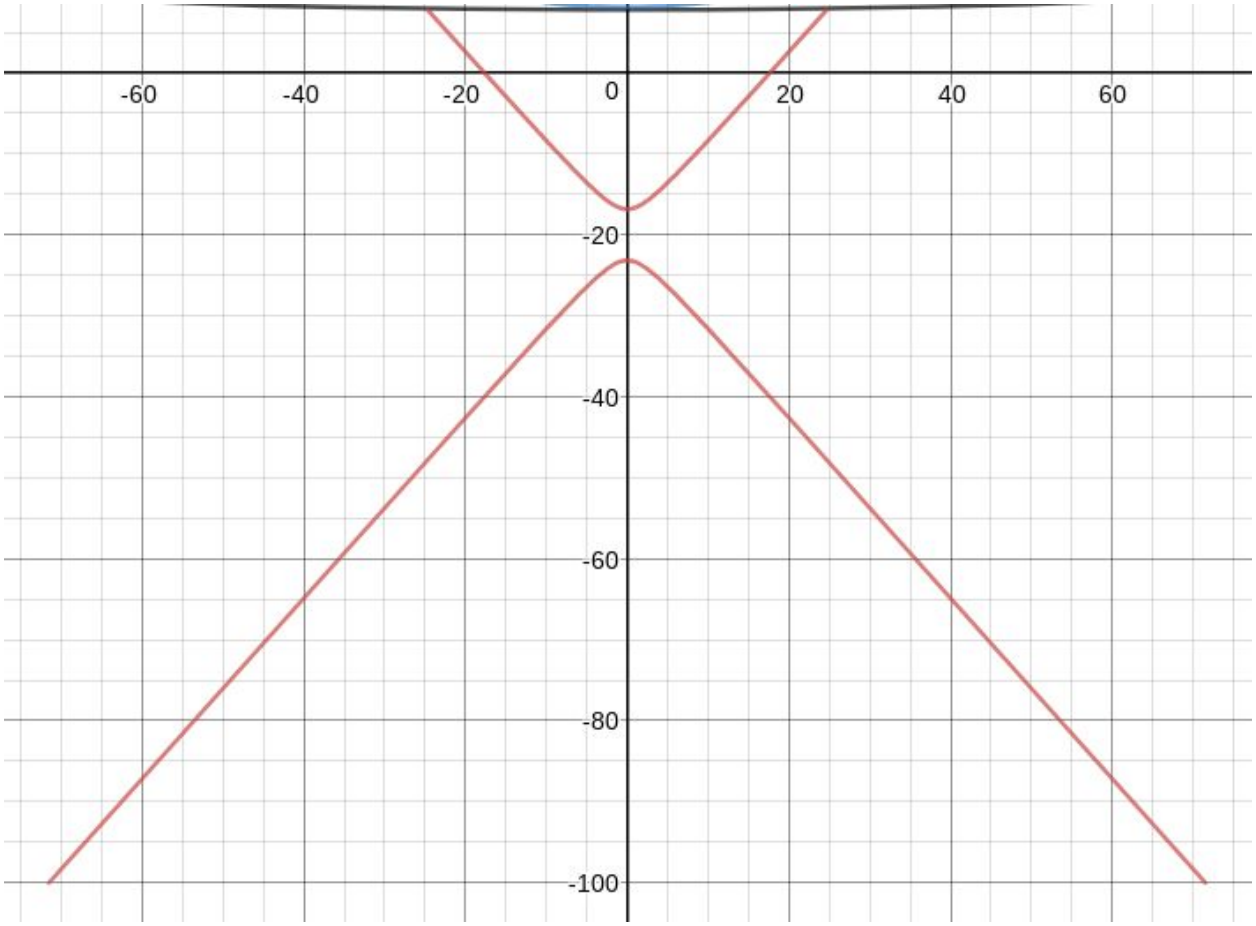
Hyperbola

Are you hyper to feast your eyes on this table hyperbola?

Standard Equation (Vertical Hyperbolas):

$$\frac{(y-k)^2}{a^2} - \frac{(y-h)^2}{b^2} = 1$$

Hyperbola #1:



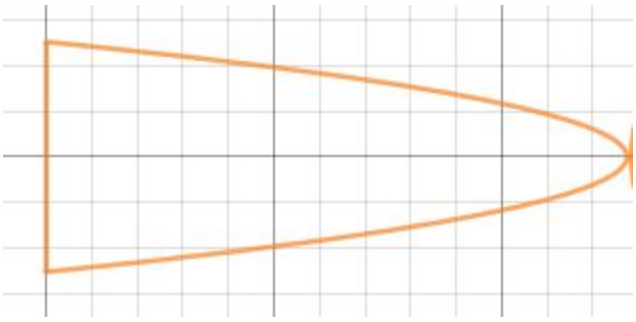
Standard equation	What is it?	Vertex	Foci	Asymptotes	A, B, C	Center
$\frac{(y+20)^2}{10} - \frac{(y-0)^2}{8} = 1$	Vertical	$(0,-20+\sqrt{10})$ $(0,-20-\sqrt{10})$	(0,-7.2) & (0,-32.8)	$y=-\frac{\sqrt{10}}{\sqrt{8}}x-20$	A: $\sqrt{10}$, B: $\sqrt{8}$, C: $\sqrt{164}$	(0, -20)

Parabola

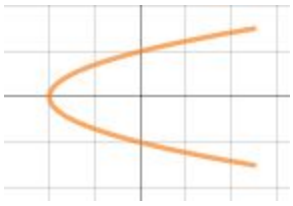
Look at the amazing parabolas the fish have on them!

Standard equation:

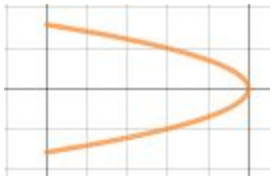
$$y=ax^2+bx+c$$

Parabola #1: 

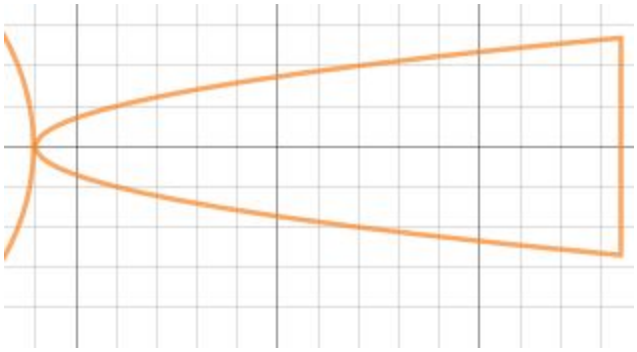
Vertex	Roots
(-44.5, 70)	No possible roots

Parabola #2: 

Vertex	Roots
(-34, 70)	No possible roots

Parabola #3: 

Vertex	Roots
(30, 120)	No possible roots



Parabola #4:

Vertex	Roots
(38, 120)	No possible roots

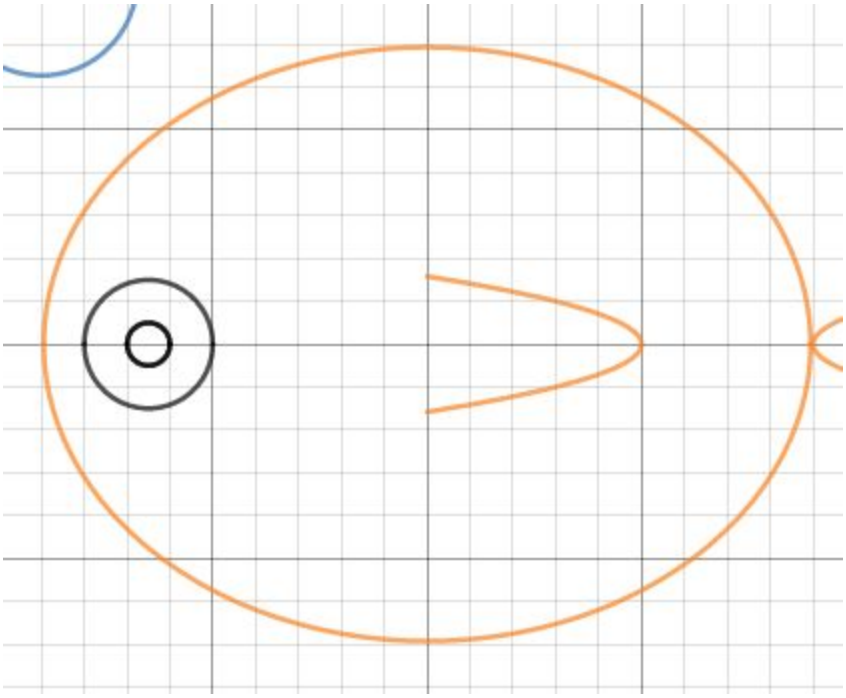
Ellipses

The math term not the moon term you Twilight fan!

Standard form (Horizontal):

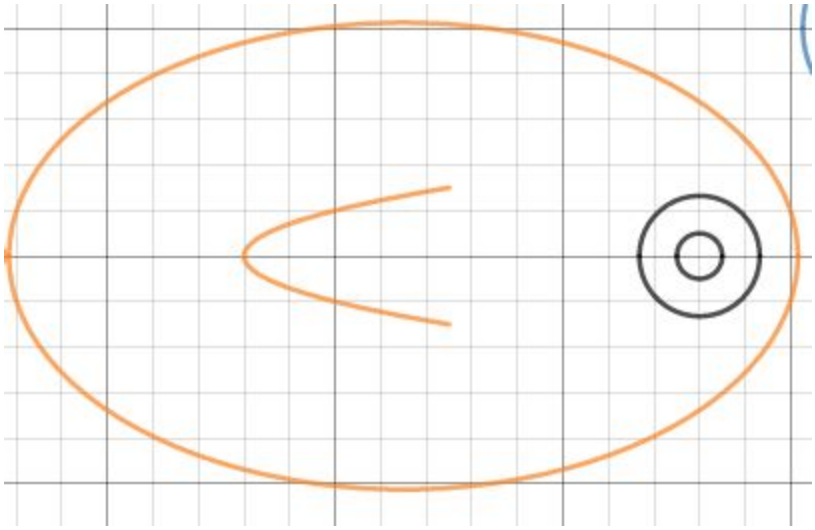
$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$

Ellipse #1:



Standard equation	What is it?	Vertices	Co-Vertices	Center
$\frac{(x-20)^2}{1920} + \frac{(y-120)^2}{192} = 1$	Horizontal	$(20+\sqrt{1920}, 120)$ & $(20-\sqrt{192}, 120)$		(20,120)

Ellipse #2:

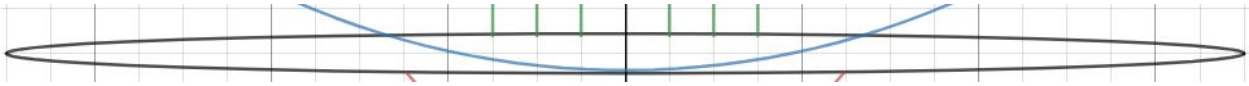


Standard equation	What is it?	Vertices	Center
$\frac{(x+27)^2}{1920} + \frac{(y-170)^2}{192} = 150$	Horizontal	$(27-\sqrt{1920},170)$ & $(27-\sqrt{192},170)$	(-27,70)

Ellipse #3:

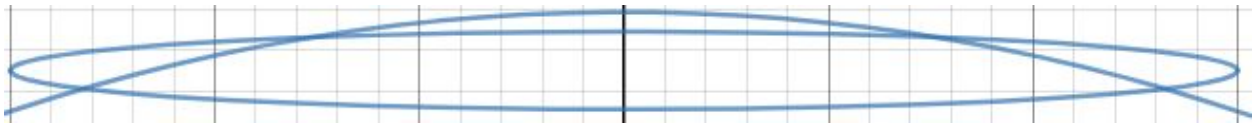
Standard equation	What is it?	Vertices	Center
$\frac{(x-0)^2}{70} + \frac{(y-10)^2}{-.02} = 70$	Horizontal	$(0+\sqrt{70},10)$ & $(10+\sqrt{-.02},10)$	(0,10)

Ellipse #4:



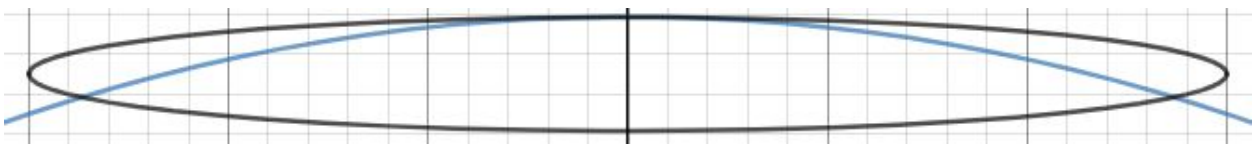
Standard equation	What is it?	Vertices	Center
$\frac{(x-0)^2}{70} + \frac{(y-10)^2}{-.07} = 70$	Horizontal	$(0+\sqrt{70},10)$ & $(10+\sqrt{-.07},10)$	(0, 10)

Ellipse #5:



Standard equation	What is it?	Vertices	Center
$\frac{(x-0)^2}{100} + \frac{(y-0)^2}{-.4} = 9$	Horizontal	$(0+\sqrt{100},0)$ & $(0+\sqrt{-.4},0)$	(0,0)

Ellipse #6:



Standard equation	What is it?	Vertices	Center
$(x-0)^2/100-(y-195)^2/-.9=9$	Horizontal	$(0+\sqrt{100},-195)$ & $(0+\sqrt{.9},-195)$	(0,195)