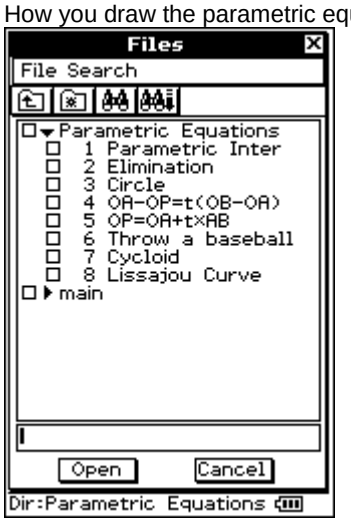
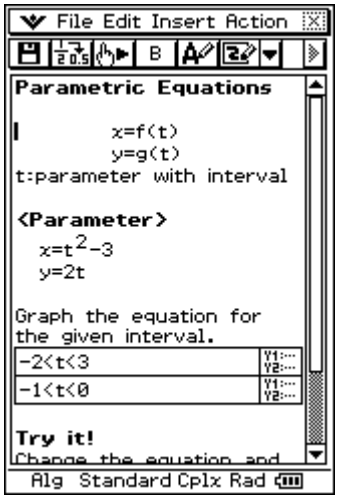
# Parametric

This week we are looking at parametric equations and how the intervals change the graph. We show how to compute the time it takes for the baseball to hit the ground and parametric equations that pass through two points. Play with the equations by changing the values. Can you predict what the graph will look like?

**This file includes eActivities on:**
**1 Parametric Interval** How you draw the parametric equation. When you change the interval, you have another graph.
**2 Elimination** Eliminate the parameter--find the equation. When drawing the parametric graph, you can use the with-function (|) to choose the interval to graph.
**3 Circle** Draw the circle using parametric equations. Change the interval and just that part of the circle will be graphed.
**4 Line OA-OP=t(OB-OA)** Find the parametric equations that pass through two points.
**5 Line OP=OA+txAB** Another look at finding the parametric equations that pass through two points.
**6 Throw a baseball** Want to find out when the baseball will hit the ground?
**7 Cycloid** Draw the basic Cycloid curve and then try your own!
**8 Lissajou Curve** Lissajou Curve can also be written using parametric equations. Adjust the equation and enjoy the graphs.

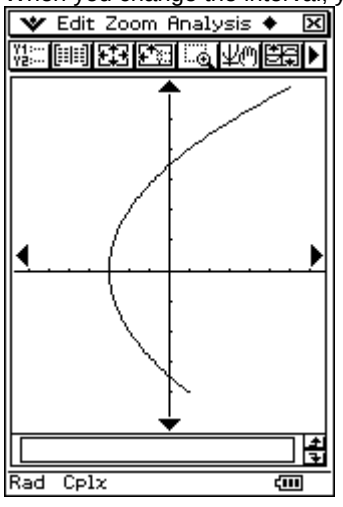
**1 Parametric Interval**
How you draw the parametric equation.

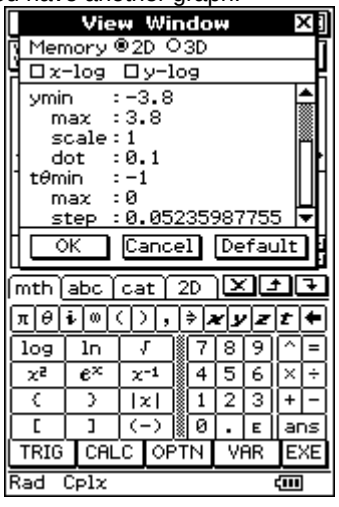


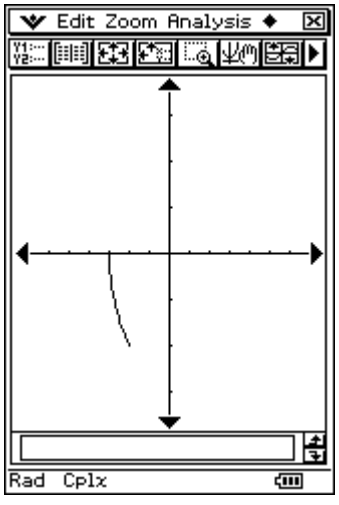





When you change the interval, you have another graph.

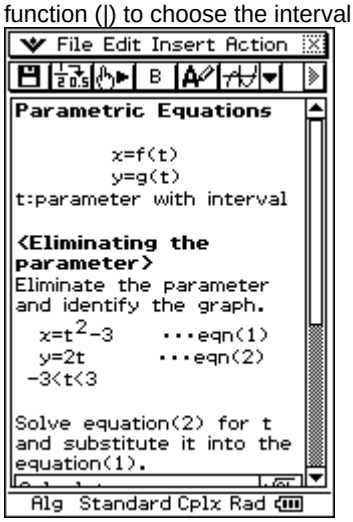


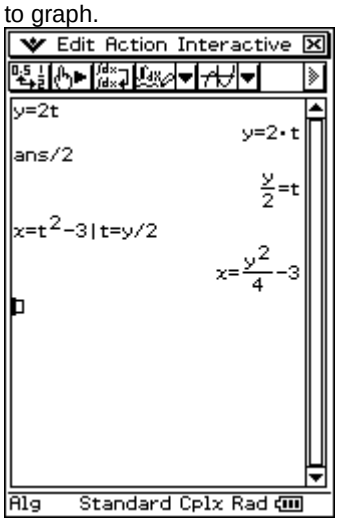



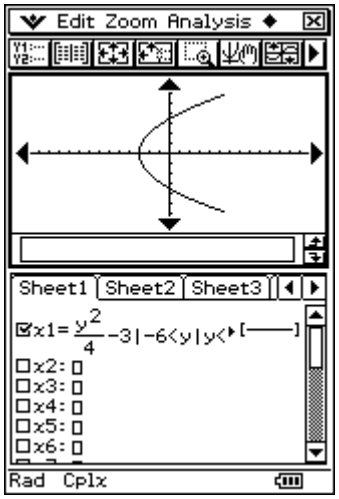



**2 Elimination**

Eliminate the parameter--find the equation. When drawing the parametric graph, you can use the with-function (|) to choose the interval to graph.

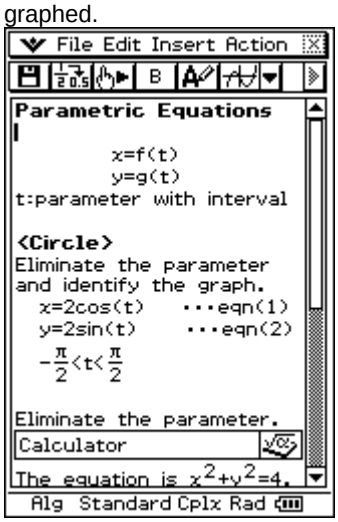


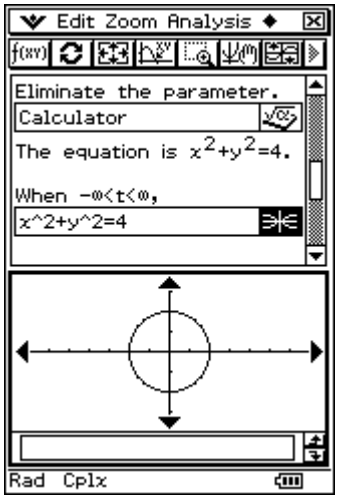



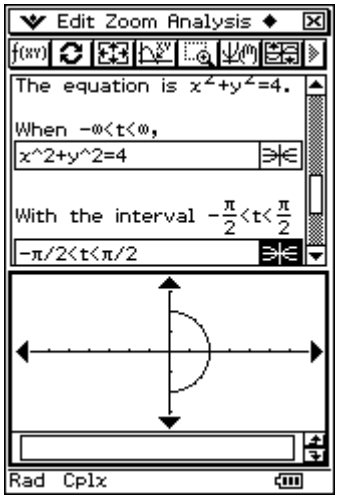




**3 Circle**

Draw the circle by the parametric equations. Change the interval and just that part of the circle will be graphed.

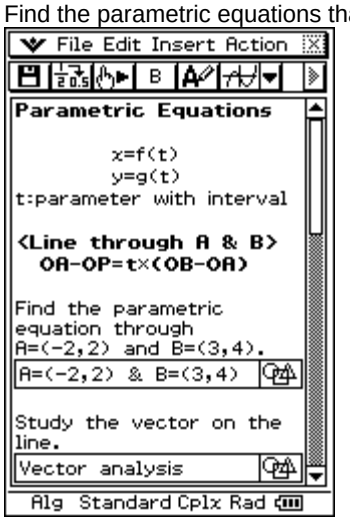


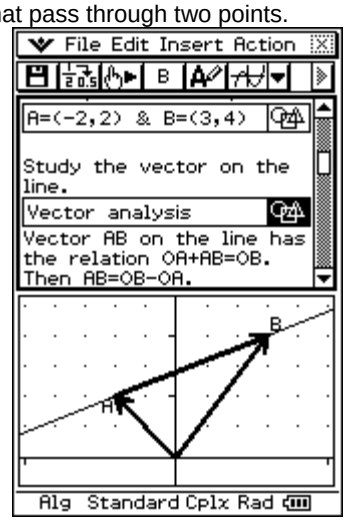



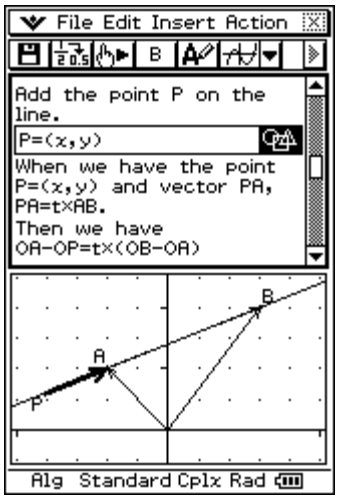



**4 Line OA-OP=t(OB-OA)**

Find the parametric equations that pass through two points.

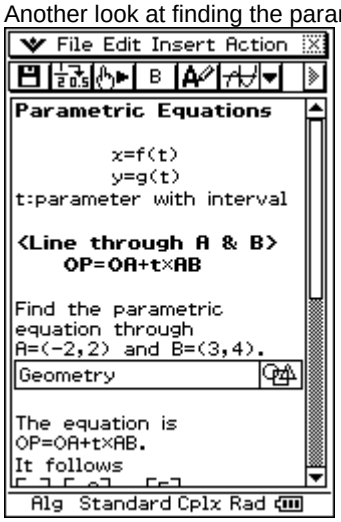


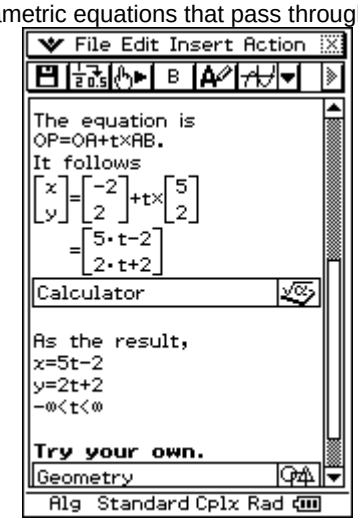



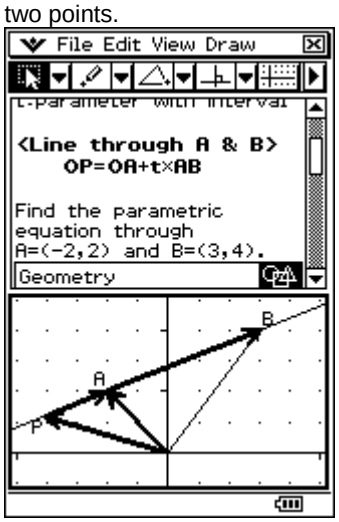




**5 Line OP=OA+txAB**

Another look at finding the parametric equations that pass through two points.

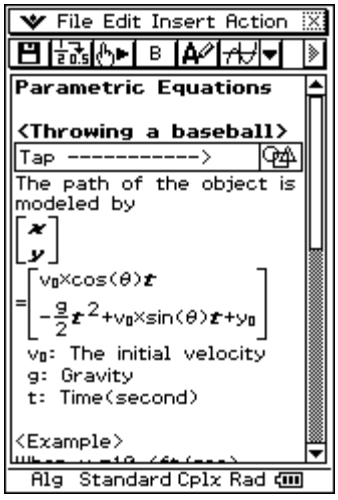


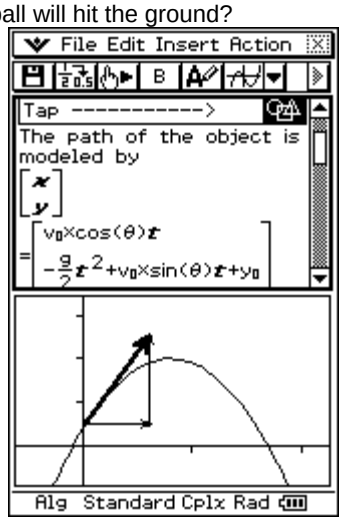



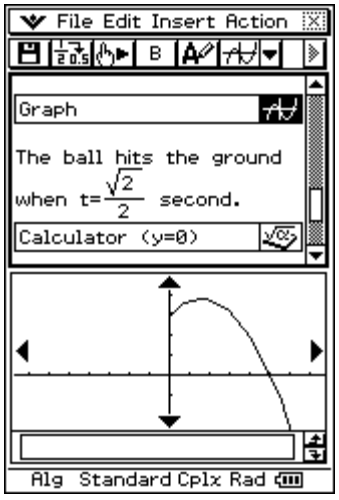




**6 Throwing a baseball**

Want to find out when the baseball will hit the ground?

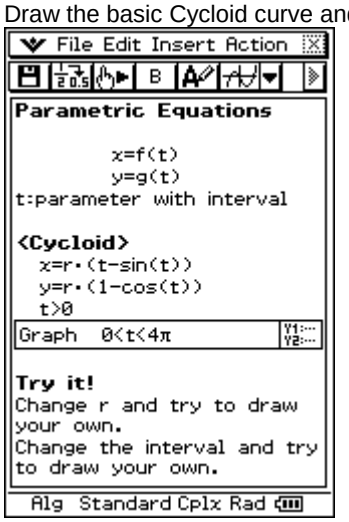


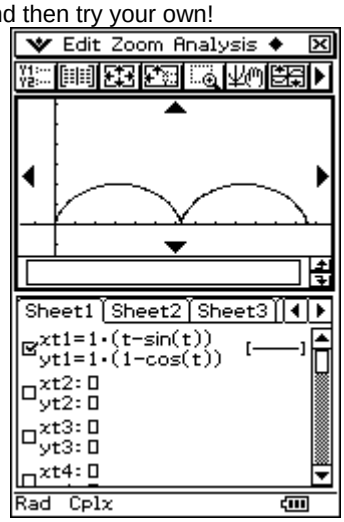



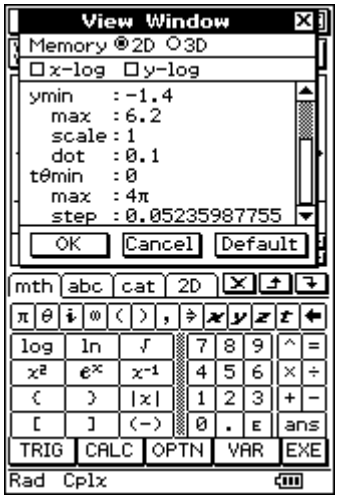



**7 Cycloid**

Draw the basic Cycloid curve and then try your own!




**8 Lissajou Curve**

Lissajou Curve can also be written using parametric equations. Adjust the equation and enjoy the graphs.