# Conic Sections Project

You and your teammates are members of a marketing team for TI. You were hired to create a marketing campaign for a new TI-calculator. In order to keep your job, your campaign needs to have the following components:

- A name for the new calculator and description of its features and improvements from the TI-84
- Estimated production cost and sale price with a mathematical model showing how many calculators you will need to sell to make a profit
- A graph example from each member that fits a common theme
- An image demonstrating your knowledge of conics
- A filmed video advertisement (30-90 sec) promoting the new calculator

**You will present your advertisements and plan on Monday, November 4th.**

# Rubric

This will be a test grade on the 2nd nine weeks and will be based on the following rubric:

**Group Component** - 50 points

- Marketing plan includes name, description, and cost model……10 points
- Advertisement is ready to view on November 4……10 points
- Quality of presentation and advertisement ……20 points
  Outside of the box thinking……10 points

**Individual Component** - 50 points

- Created picture using conics- on time, high quality, includes all conics, fits theme…… 20 points
- Finding conics in images- on time, fits theme, accurate, includes all conics…… 20 points
- Quality of one page typed applications paper……10 points

There will be two separate google classroom assignments to submit your project. The first assignment will be for your group components (Presentation & Filmed Advertisement). Only one member of your group needs to submit these parts. The second assignment must be turned in for everyone individually and will include TWO desmos links and a one-page typed paper.

If some group members are absent November 4, you are still expected to present. Your group's advertisement and marketing plan and your individual graphs on Desmos must all be submitted by November 4 (9AM) or it is considered late, even if you are absent that day.

# Details for Project Components

## Group Component

**Presentation:**
Your presentation should include the name of your calculator, a description of it and its features, your cost estimates, and your plan for sales. You also will show your advertisement at this time. All team members need to speak during your presentation and you will need some visual aide in addition to your video.

**Estimated Costs:**
Try to make this as realistic as you can, but you are estimating these costs. Think about what fixed costs will occur no matter how many calculators are produced and what variable costs there are based on the number of calculators produced. You'll need to list the costs you come up with and include your estimate for the price. Come up with an equation that shows what your total cost will be based on the number of calculators you sell.

**Plan for Sales:**
How are you going to sell these? What's your audience? How much will you charge? How long will it take to make a profit? What else can you think of that is part of your plan to make a profit?

## Individual Component

**Create a Picture Using Conics on Desmos:**
To show the calculator's graphing capabilities, you will create a graph online using desmos.com (not student.desmos, just regular desmos.com). On this website, each group member will create their own drawing that uses at least one of each conic section (parabola, circle, ellipse and hyperbola). Your group will need to have a theme that each drawing fits into (stuff is not a theme…). This theme does not need to have anything to do with your marketing plan and calculator name, but it can if you want it to. You may include other equations in your drawing, but use of each conic section must be clear. You also may restrict the domain for any of your equations. You will submit your graph by submitting the link on google classroom.

**Finding Conics in Images:**
On a separate graph, you need to find an image or images (no more than 2 different images) that contain one of each of the conic sections. This image also needs to fit your group's theme from the picture you created. You will upload this image to Desmos and add the equation of the conic that best fits each the conic in your image. Make each of your equations a different color. Submit the link to your graph on google classroom.

**Applications Paper:**
Double-spaced, one page, 12-point font. Explain how conic sections come up in the real world and why they are important. You may focus on one particular type of conic section, but your paper should be insightful and accurate. You should upload this paper to google classroom.

Academic dishonestly or plagiarism is automatic grounds for zero points on any part of the project. If you choose to submit work that is not your own, your project will be submitted to an RHS administrator and your parents will be contacted. Just don't do it!