

Chapter 18 Project

What's in a Logo?

An activity to demonstrate the use of conic sections in real life.



You constantly see company logos in your day-to-day life. Companies use logos for brand recognition and to advertise their products. Take a look around you as you go throughout your day and you'll see company logos everywhere. Your kitchen appliances have logos on them, your car has a logo on it, your smartphone has a logo, and logos appear in all forms of advertisements. To make a logo clean and easy to remember, a company may use conic sections in the design.

Use the internet to look up or research the logos mentioned in the problems that follow. A graphing calculator or graphing application will be needed to recreate the logos indicated in the problems. If you don't have a graphing calculator, you can use the free graphing application located at www.desmos.com.

1. Some logos designs, such as the Target logo, are based on concentric circles. Circles are concentric when they share the same center. Perform an internet search for other logos that use concentric circles. Draw three of these logos.
2. The Target logo consists of three concentric circles. Use your graphing tool to recreate the Target logo. Sketch the recreation on the coordinate plane and write the equations you used.
3. The logo for the Olympic Games consists of five circles that all have the same radius. Use your graphing tool to recreate the Olympic Games logo. Sketch the recreation on the coordinate plane and write the equations you used. Use the equation $x^2 + y^2 = 4$ to represent the center ring on the top row.
4. The Toyota logo consists of three ellipses. Use your graphing tool to recreate the Toyota logo. Sketch the recreation on the coordinate plane and write the equations you used.
5. Find an existing logo or create your own logo that consists of more than one type of conic section. Describe the conic sections used in the logo and provide a sketch of the logo.
6. Recreate the logo by graphing conic sections. Create a simpler version of the logo, if necessary. Sketch your version of the logo on the coordinate plane and write the equations you used.