

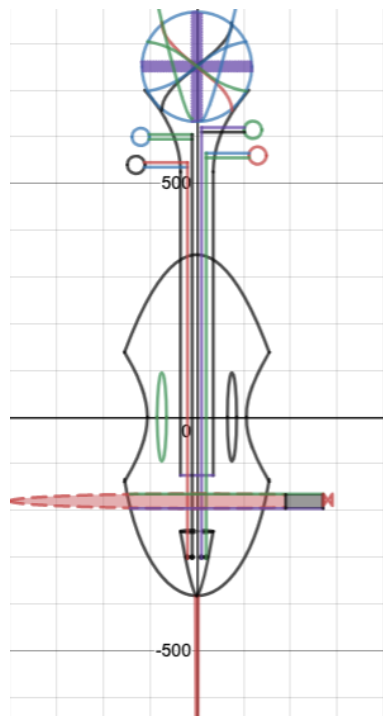
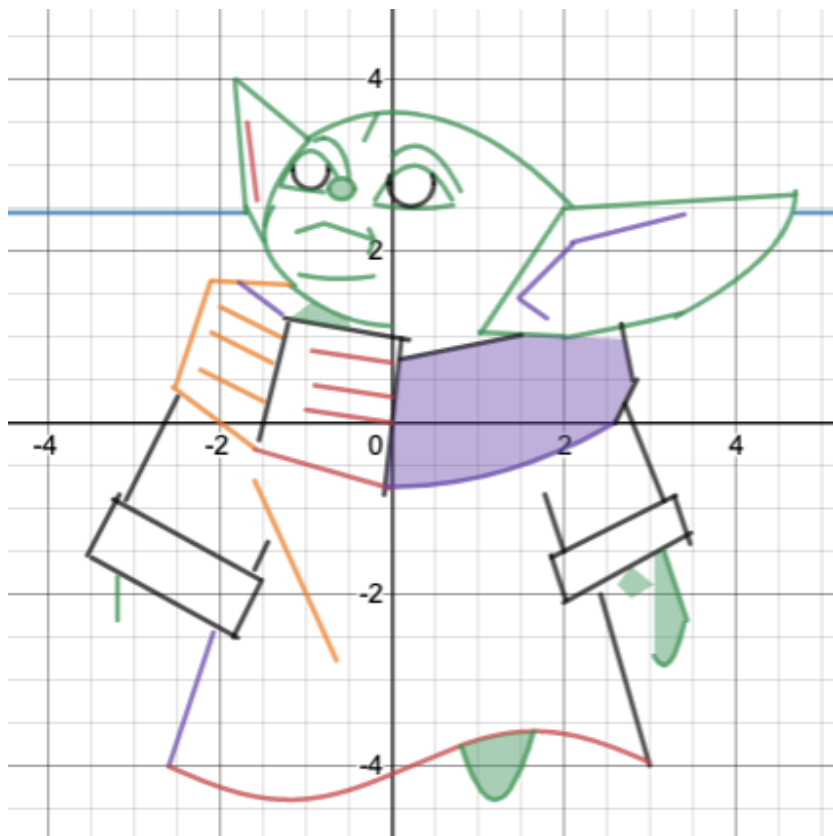
# Algebra 2 Honors Conic Sections Alternate Assessment.

Here are some examples of excellent projects along with some cool hacks (see animations here:)

<https://eatplaymath.blogspot.com/2020/12/desmos-conics-projects-2020-with.html>

Last year's projects: <https://padlet.com/lisawiner/x0ln629xss93kaw7>





- 1  $-\left(\frac{1}{25}x - 1\right)^2 + 10 \{19 > x > 0\}$
- 2  $-\left(\frac{1}{25}x - 1\right)^2 + 10 \{20.3 > x > 20\}$
- 3  $-\left(\frac{1}{25}x - 1\right)^2 + 10 \{55.9 > x > 21.33\}$
- 4  $(x - 20)^2 + (y - 30)^2 = 9$
- 5  $(x - 20)^2 + (y - 30)^2 = 9 \{29.4 < y < 29.4\}$
- 6  $-1.5\sqrt{-2x - 40} + 33 \{17.02 < x < 23\}$
- 7  $-1.5\sqrt{-2x + 40} + 33 \{17.02 < x < 23\}$
- 8  $(x - 22)^2 + (y - 33.5)^2 = 1$
- 9  $x = 19.01 \{26. < y < 27.142\}$
- 10  $x = 21 \{26. < y < 27.142\}$

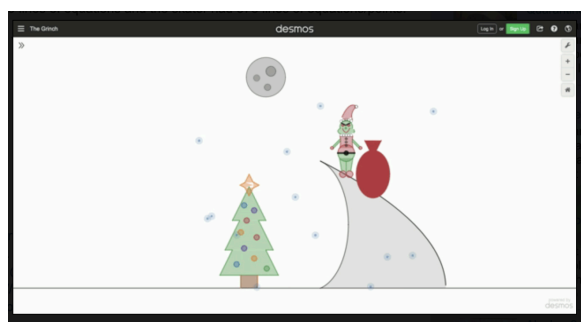
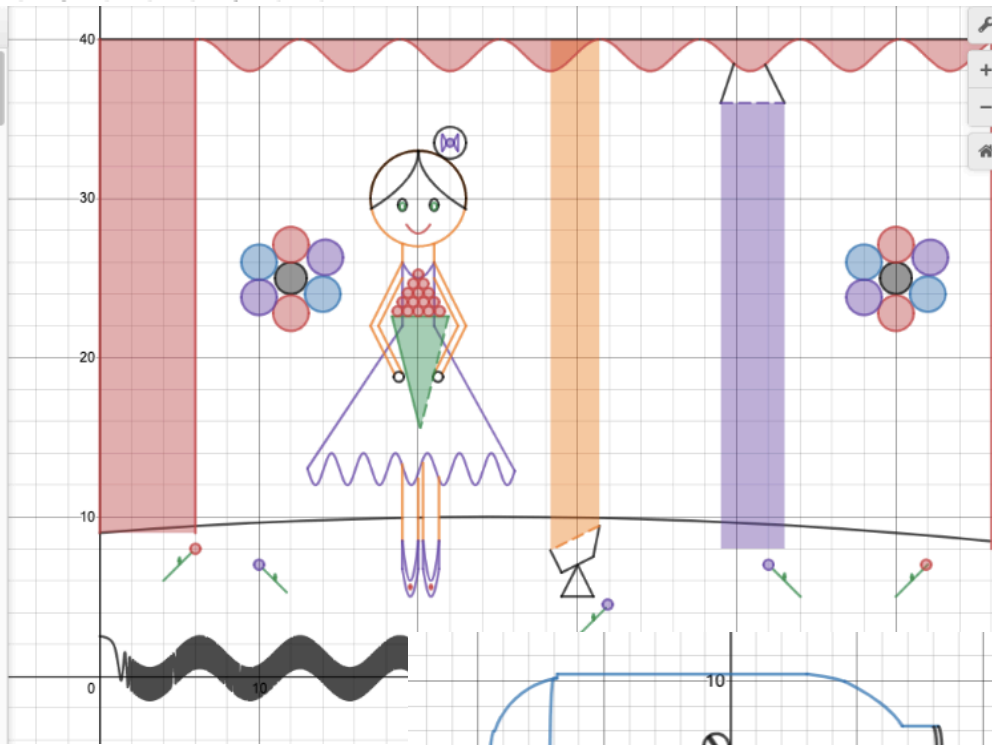
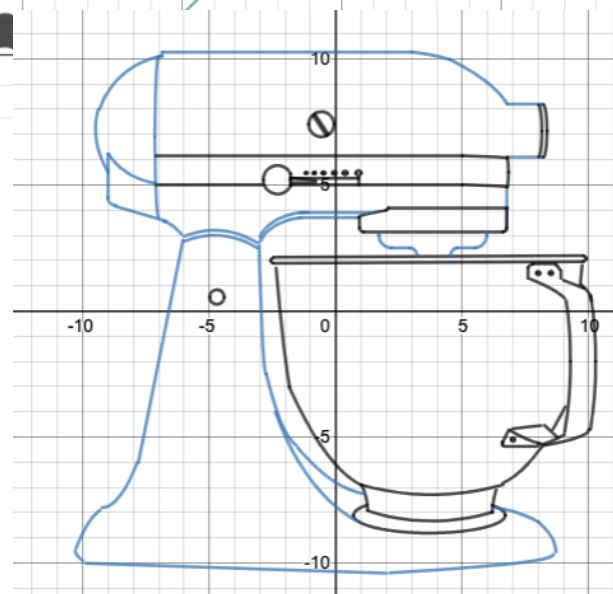
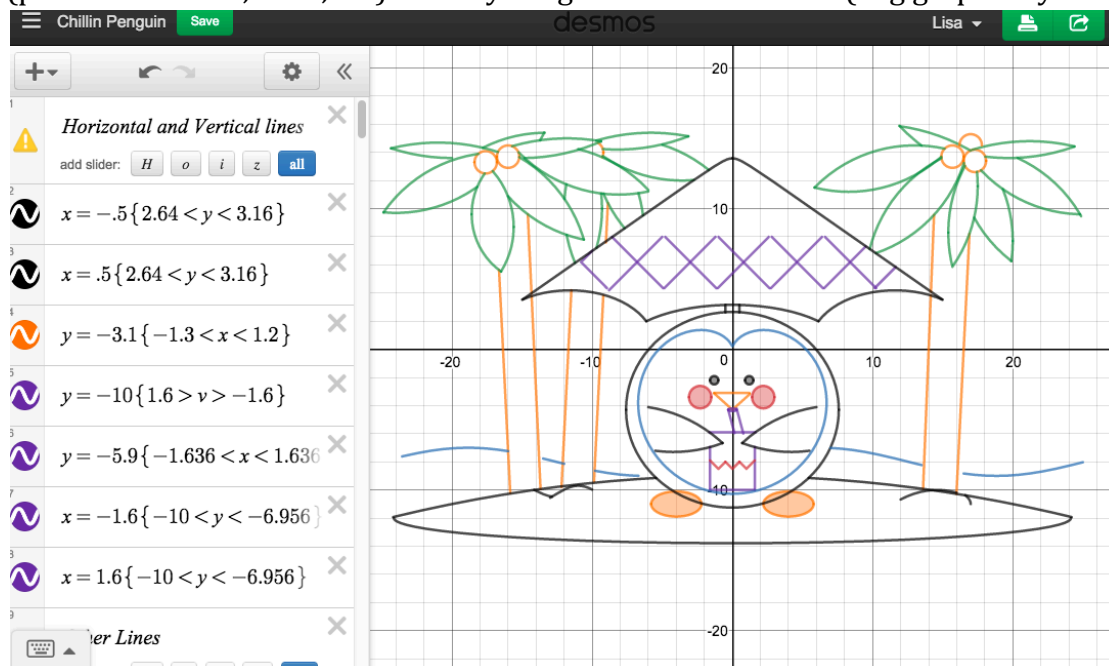


Figure 1 - this is animated on the website



Your task is to make a picture of your own desire that incorporates all of the conic sections we have learned (parabola, hyperbola, circle, and ellipse) as well as any other graphs we have learned this year (parent functions, lines, etc) and anything we haven't learned (trig graphs...you name it!)



You will want to **restrict some domains or ranges**, as you can see has been done in the drawing above.

**SAVE YOUR PICTURE ON DESMOS.COM AS YOU WORK ON IT. You can create an account or connect with your Google account.**

You are NOT allowed to copy any project already created (i.e., that you might find on the Internet) as this will be an Honor Code violation. Do not create a picture of something already created on Desmos. For example, if you google "Mickey Mouse Desmos" you will see a ton of pictures...this is NOT something you should then draw.

Finally, here are some short student-made videos that you may want to use for your classes.

- [Student made video on how to animate in the shape of absolute value.](#)
- [Student made video on how to arrange order of shading on Desmos \(so one object pops in front of another\)](#)
- [Student made video on how to shade between two graphs](#)

I will not tell you how many graphs to use, but use enough that you think your project is "full" and "sophisticated." You may color it or simply use the colored lines from Desmos. Please don't ask me if your project is "OK" or "Good enough." If you are unsure, then do more.

**Peer review – 5 points** – share your graph with the person you are allocated to get feedback and give that person excellent feedback. (Randomly selected)

**Lara → Alejandro → Hannah → Lila → Ian → Sean → Matthew → Sky → Cole → Nicholas → Lara**

**RUBRIC 50 POINTS TOTAL**

\_\_\_ 10 points Creativity – choose something that represents something unique about YOU!!

\_\_\_ 10 points Colorful, has Shading (use [inequalities](#) to shade)

\_\_\_ 10 points Sophistication of conics\*

\_\_\_ 10 points Use of domain restrictions

\_\_\_ 10 points Project is polished

\*Must have at least one: ellipse, circle, parabola, hyperbola, other parent function as a minimum.

-10% off per day late

Due December 16th, midnight