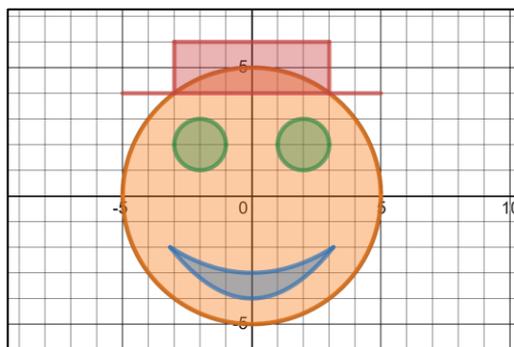


Creating Maths Art in Desmos

You can create pictures in in Desmos (www.desmos.com) using the graphs of equations and inequalities.

The instructions for creating the picture shown are given as an introduction:



Creating the face and eyes

1. To create the outline for the faces add the equation: $x^2 + y^2 = 25$
2. To shade the face add the inequality: $x^2 + y^2 \leq 25$
3. To create the eyes add the inequalities: $(x - 2)^2 + (y - 2)^2 \leq 1$ and $(x + 2)^2 + (y - 2)^2 \leq 1$
4. To change the colour of the eyes click and hold on the coloured circles next to their equations.

Use the a^2 button on the onscreen keyboard to get the squared symbol

Type \leq to get the \leq symbol

Creating the mouth

5. To create the outline of the mouth add the equations: $y_1 = 0.2x^2 - 4$ and $y_2 = 0.1x^2 - 3$
6. Hide the curves by clicking the coloured circle next to their equations.
7. To create the mouth add the inequality: $y_1 \leq y \leq y_2$

Just type $y_1=$ and Desmos will format it for you

Creating the hat

8. To create the brim and the top of the hat add the equations: $y = 4\{-5 < x < 5\}$ and $y = 6\{-3 < x < 3\}$
9. To fill in the hat add the inequality: $-3 \leq x \leq 3\{4 < y < 6\}$

Saving your file

10. Create an account or sign-in and press **Untitled Graph** (top-left) to name and save your art.

- To view a completed version of this online see: www.desmos.com/calculator/xfzup7mfk
- Video instructions can be seen at: youtu.be/Ei3mKlbrz-E
- Lots more examples of Desmos art can be seen at: www.desmos.com/art