

Beats ... Desmos Style

Open **Desmos** and do the following:

1. Launch Calculator and sign in.
2. Type in **Asin(fx)** into an expression field. Add sliders.
(Recall **A** is amplitude, **f** is the frequency)
3. Use the + menu (top left) to add a new expression field. Type **Asin(gx)** into a second expression field and add the sliders.
(**g** is the frequency of this second wave.)
4. Click on the **Gear** menu to edit your list of expressions.
5. Select three different colors for the three expression fields. To do so, tap on the colored dot to the left of the field and select the desired color.
6. Set the range for **f** and **g** to go from **250** to **750** with a step of **1**.
To do so, click on the small numbers to the left or the right of the sliders. Type values into the field for the minimum, maximum and step.
Example: $250 \leq f \leq 750$ step: 1
7. Set the range for the **A** slider to go from **0** to **0.2** by **0.01**.
8. Use the + menu to create a third expression field. sum the two waves together to create the Resultant wave.
That is, type **Ains(fx) + Asin(gx)**.
9. Zoom in a few times to view the beat patterns. Say wow! Save your file as **Beats**.

