Module 4.4

We have seen that the step function `f(x) = x > 0` has a 0 derivative, whereas the sigmoid function `f(x) = sigmoid(x)` has a non-zero derivative, representing a soft version of tne step function. Sometimes though the sigmoid is too smooth an approximation, i.e. it produces values between 0 and 1 but not clearly on either side.

Luckily we can mix the two functions together to force the network to be more decisive. This trick allows us to make the function look more like a sigma or a step depending on a guide switch, known as the temperature. If we set `f(x, t) = sigmoid(x / t)` then t represents a temperature parameter that controls how smooth the soft version of the function is.

For this question, we want you to reason about how the temperature t impacts the shape of the function.

1 1 point

The function `f` acts more like the step function when the 'temperature' gets ...

- ○ Higher
- ○ Lower