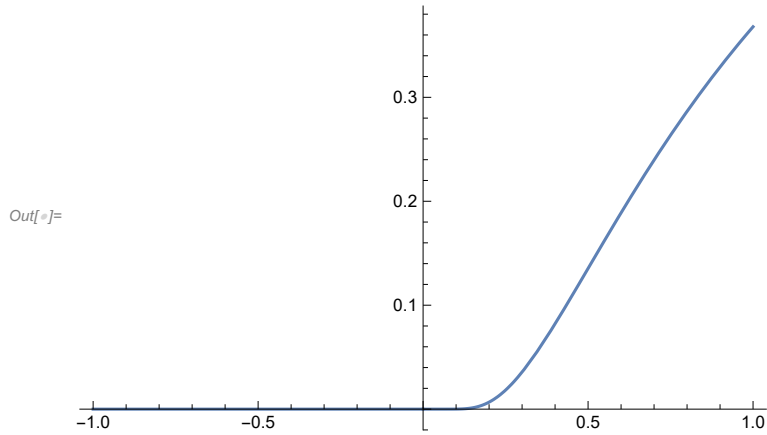
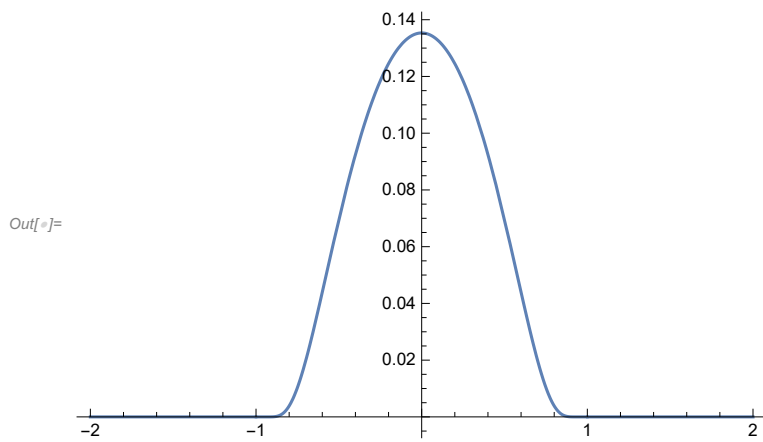


Pensieve header: A demo of the basic ∞ lego blocks.

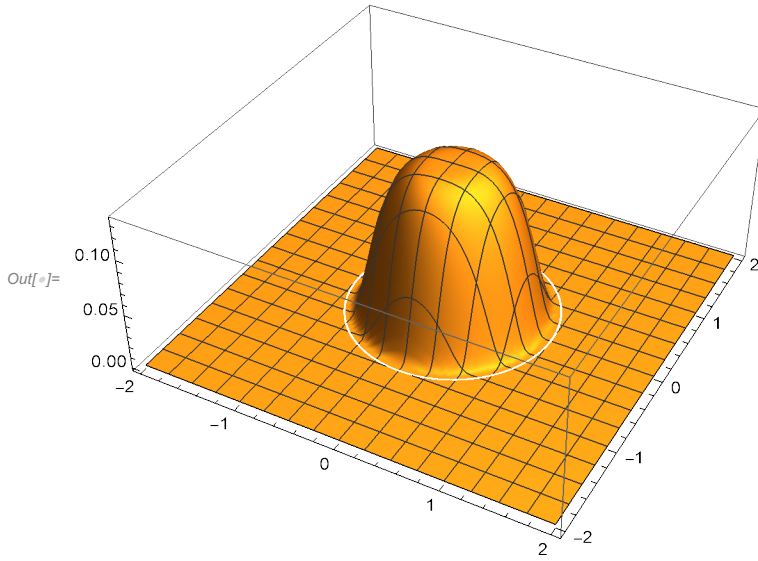
```
In[ ]:=  $\sigma[x_] := \begin{cases} e^{-1/x} & x > 0 \\ 0 & x \leq 0 \end{cases}$ 
Plot[ $\sigma[x]$ , {x, -1, 1}]
```



```
In[ ]:=  $\beta_{\epsilon}[x_] := \sigma[\epsilon + x] \sigma[\epsilon - x]$ 
Plot[ $\beta_1[x]$ , {x, -2, 2}]
```



```
In[ ]:=  $\beta_{a, \epsilon}[z] := \beta_{\epsilon^2}[\text{Norm}[z - a]^2]$ 
Plot3D[ $\beta_{0,1}[\{x, y\}]$ , {x, -2, 2}, {y, -2, 2}, PlotPoints -> 100, PlotRange -> All]
```



```
In[ ]:= Z = NIntegrate[ $\beta_{\frac{1}{2}, \frac{1}{2}}[t]$ , {t, 0, 1}];
 $\theta[x_] := Z^{-1}$  NIntegrate[ $\beta_{\frac{1}{2}, \frac{1}{2}}[t]$ , {t, 0, x}]
Plot[ $\theta[x]$ , {x, -1, 2}]
```

