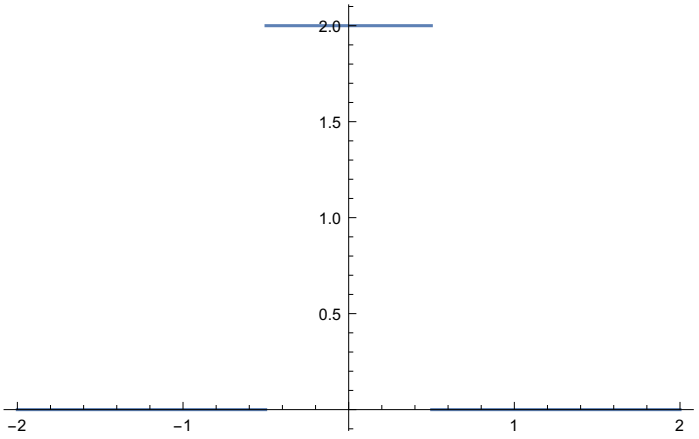
In[ ]:=
```
F[x_, α_] = (UnitStep[x + 0.5] - UnitStep[x - 0.5]) * α
```

Out[ ]=
$$\alpha\,(-\text{UnitStep}[-0.5 + x] + \text{UnitStep}[0.5 + x])$$

In[ ]:=
```
Plot[F[x, 2], {x, -2, 2}]
```

Out[ ]=

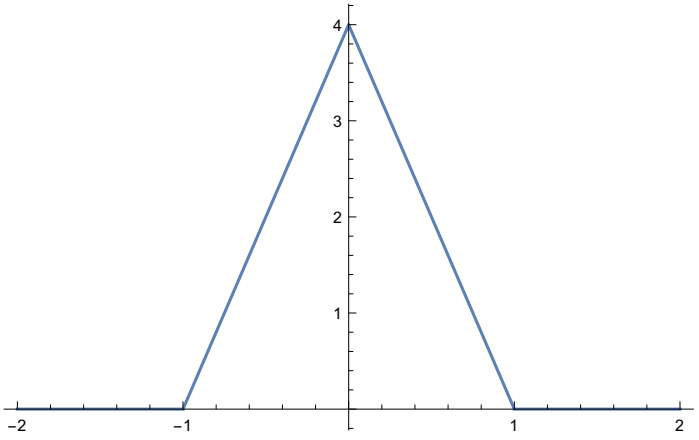


In[ ]:=
```
FAC[Δ_, α_] = Convolve[F[x, α], F[x, α], x, Δ]
```

Out[ ]=
$$\alpha^2\left(-2\left(\begin{cases}\Delta & \Delta \geq 0\\ 0 & \text{True}\end{cases}\right) + (-1. + \Delta)\,\text{UnitStep}[-1. + \Delta] + (1. + \Delta)\,\text{UnitStep}[1. + \Delta]\right)$$

In[ ]:=
```
Plot[FAC[t, 2], {t, -2, 2}]
```

Out[ ]=



In[ ]:=
```
ϵ[α_] = Rationalize[Integrate[FAC[x, α]^2, {x, -1, 1}] / FAC[0, α]^2]
```

Out[ ]=
$$\frac{2}{3}$$