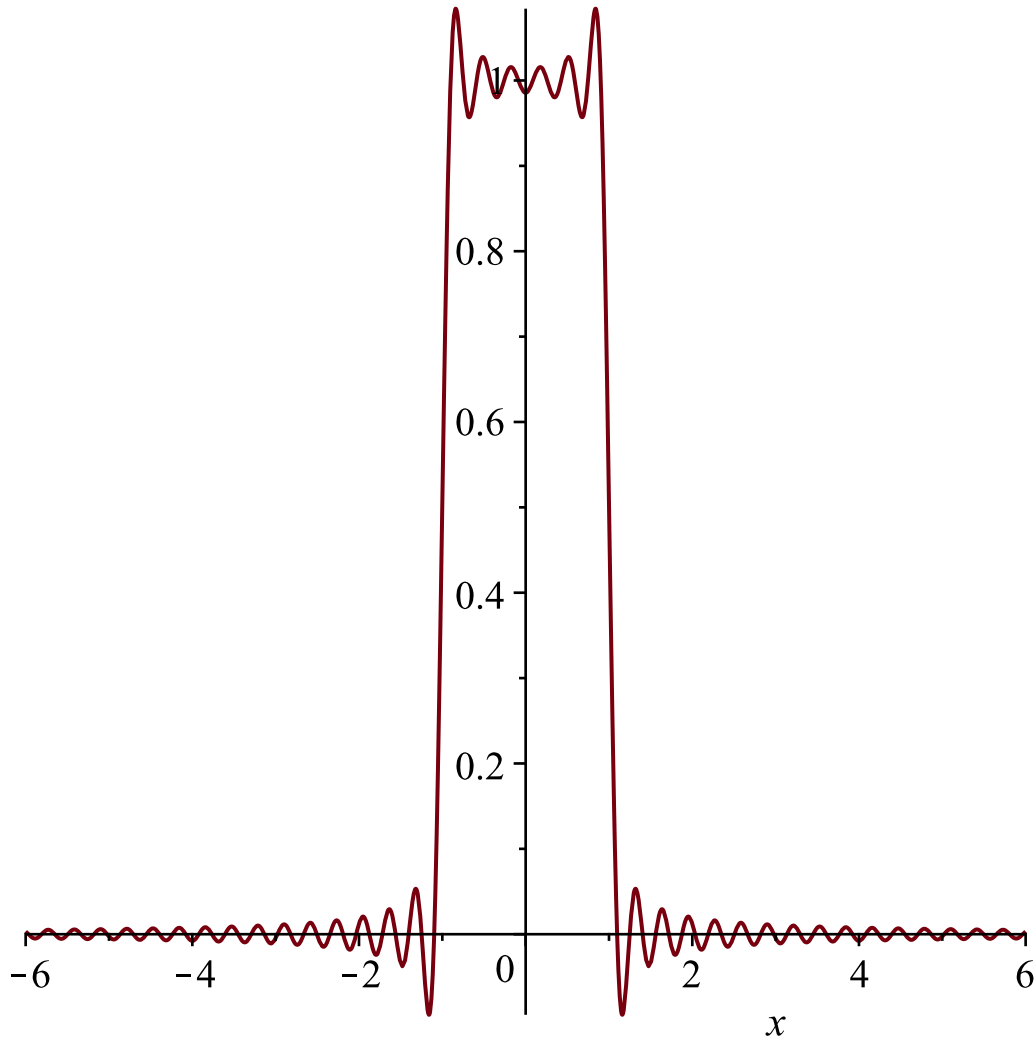


```
> u := (x,B) -> (2/Pi)*int( sin(w)*cos(w*x)/w,w=0..B) ;
```

$$u := (x, B) \mapsto \frac{2 \left(\int_0^B \frac{\sin(w) \cos(wx)}{w} dw \right)}{\pi}$$

(1)

```
> plot(u(x,20),x=-6..6) ;
```



```
> Int( sin(w)/w,w=0..infinity) ;
```

$$\int_0^{\infty} \frac{\sin(w)}{w} dw$$

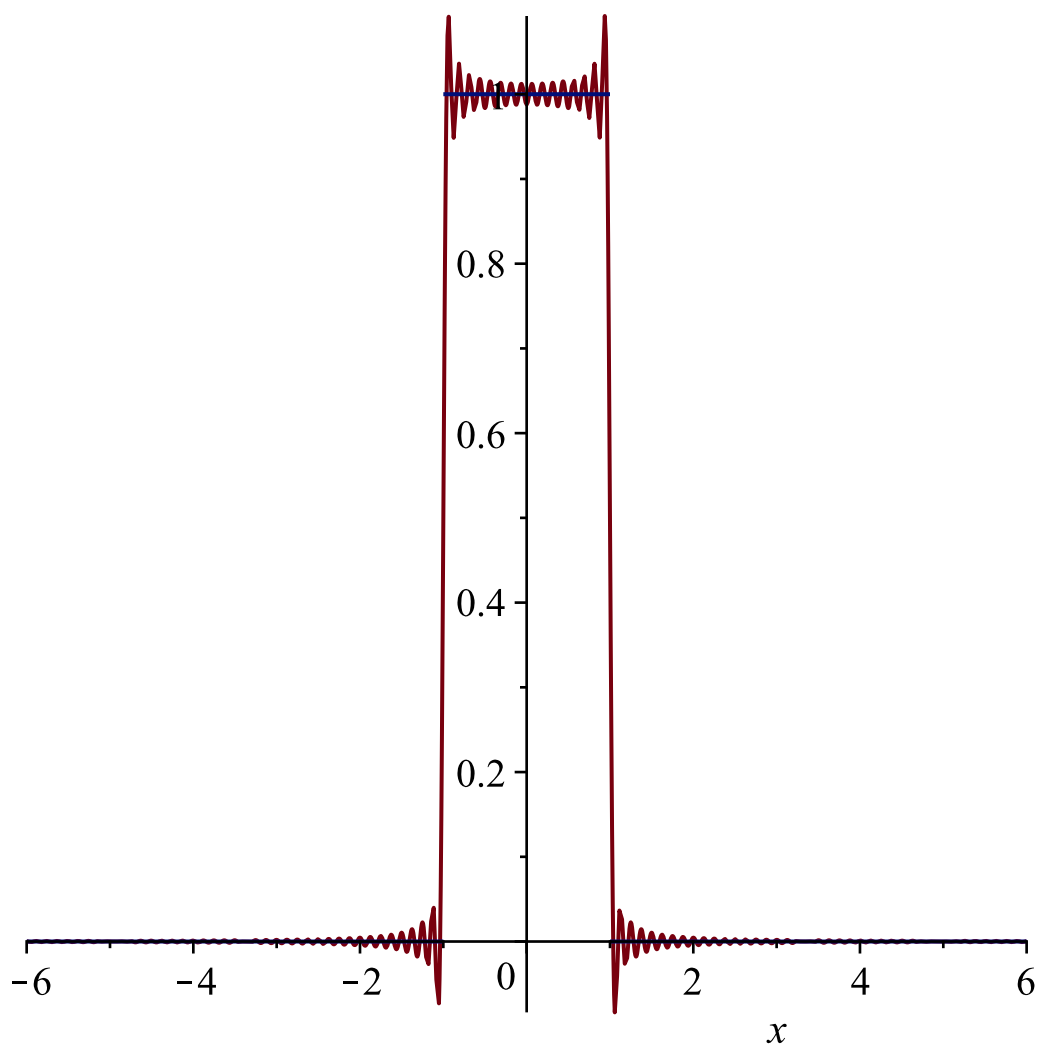
(2)

```
> v := x -> Heaviside(x+1)-Heaviside(x-1) ;
```

$$v := x \mapsto \text{Heaviside}(x+1) - \text{Heaviside}(x-1)$$

(3)

```
> plot({u(x,50),v(x)},x=-6..6,discont=true) ;
```



```
> evalf(Int( sin(w^2)*cos(w)/w,w=0..10));
```

0.5403164074

(4)

```
> int( exp(I*s*x),x=-1..1);
```

$$\frac{-I(e^{2Is} - 1)e^{-Is}}{s}$$

(5)

```
> simplify(%);
```

$$\frac{2 \sin(s)}{s}$$

(6)

```
> I^2;
```

-1

(7)