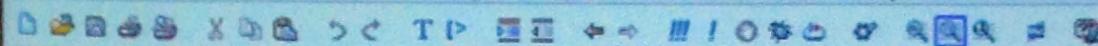


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```
> # Find Fourier cosine coefficients for  
# f(x)=1 on L/2< x < L, f(x)=0 elsewhere
```

```
> L:=1;
```

$$L := 1 \quad (1)$$

```
> f:=x->piecewise(x < L/2, 0, x < L, 1, 0);
```

$$f := x \rightarrow \text{piecewise}\left(x < \frac{1}{2}L, 0, x < L, 1, 0\right) \quad (2)$$

```
> convert(f(x), piecewise, x);
```

$$\begin{cases} 0 & x < \frac{1}{2} \\ 1 & x < 1 \\ 0 & 1 \leq x \end{cases} \quad (3)$$

```
> A:=n->(2/L)*int(f(x)*cos(n*Pi*x/L), x=0..L);
```

$$\int_0^L$$

