

```

[ > with(plots):
[ > animate( sin(2*x) * cos(2*t), x=0..Pi, t=0..2*Pi );
[ > S := x -> sum((-1)^(n+1)/(2*n-1)^2*sin((2*n-1)*x),n=1..30);

$$S := x \rightarrow \sum_{n=1}^{30} \frac{(-1)^{(n+1)} \sin((2n-1)x)}{(2n-1)^2}$$

[ > plot( S(x) , x=0..Pi);
[ > u:=(x,t)->sum((-1)^(n+1)/(2*n-1)^2*sin((2*n-1)*x)*cos((2*n-1)*t)
, n=1..10);

$$u := (x, t) \rightarrow \sum_{n=1}^{10} \frac{(-1)^{(n+1)} \sin((2n-1)x) \cos((2n-1)t)}{(2n-1)^2}$$

[ > animate( u(x,t) , x=0..Pi, t=0..2*Pi );
[ > animate3d( sin(2*x)*sin(2*y)*cos(2*t), x=0..Pi, y=0..Pi, t=0..2*Pi);
[ > plot((Heaviside(t)-Heaviside(t-Pi))*sin(t), t=0..30);
[ > animate((Heaviside(t-x)-Heaviside(t-x-Pi))*sin(t-x), x=0..30, t=0..30, numpoints=500);

```