

```
a = 2; l = 2  $\pi$ ; c = 5; b = 2; h = 5;
f[x_] := Piecewise[{{h / (1 - b) (x + 1), -1  $\leq$  x  $\leq$  -b},
  {h, -b  $\leq$  x  $\leq$  b}, {h / (1 - b) (1 - x), b  $\leq$  x  $\leq$  1}}]
g[x_] := Exp[-x^2]

eqncond = { $\partial_{t,t}u[t, x] == a^2 \partial_{x,x}u[t, x]$ , u[0, x] == f[x],
  Derivative[1, 0][u][0, x] == g[x]};

sol = DSolve[eqncond, u, {t, x}] // Flatten
```