Using Maple to plot singularity functions

Define singularity function "sfn" using Heaviside function

\[ sfn := \text{proc}(x, a, n) \ (x-a)^n \ast \text{Heaviside}(x-a) \ \text{end;} \]

Example: bending moment in three-point bending

\[ M := (x) \rightarrow \left( \frac{P}{2} \right) sfn(x, 0, 1) - P \ast sfn(x, L/2, 1); \]

Define numerical parameters for plotting purposes

\[ \text{Digits}:=4; P:=1; L:=1; \]

Construct plot

\[ \text{plot}(M(x), x=0..L); \]