$$grid(X,Y) := \left\|\begin{array}{l}
O \leftarrow \mathbf{ORIGIN} \\
\begin{bmatrix} n_x & n_y \end{bmatrix} \leftarrow \overrightarrow{\mathrm{ceil}\left(\begin{bmatrix} \dfrac{X_{O+1}-X_O}{X_{O+2}} & \dfrac{Y_{O+1}-Y_O}{Y_{O+2}} \end{bmatrix}\right)} \\
G \leftarrow \begin{bmatrix} \text{“dummy”} & \text{“dummy”} \end{bmatrix} \\
\text{for } i_x \in 0..n_x \\
\quad \left\| \begin{array}{l} x \leftarrow X_O + i_x \cdot X_{O+2} \\ G \leftarrow \mathrm{stack}\left(G, \begin{bmatrix} x & Y_O \\ x & Y_{O+1} \\ NaN & NaN \end{bmatrix}\right) \end{array} \right. \\
\text{for } i_y \in 0..n_y \\
\quad \left\| \begin{array}{l} y \leftarrow Y_O + i_y \cdot Y_{O+2} \\ G \leftarrow \mathrm{stack}\left(G, \begin{bmatrix} X_O & y \\ X_{O+1} & y \\ NaN & NaN \end{bmatrix}\right) \end{array} \right. \\
\text{return } \mathrm{submatrix}\left(G, O+1, \mathrm{last}\left(G^{\langle O \rangle}\right), O, O+1\right)
\end{array}\right.$$

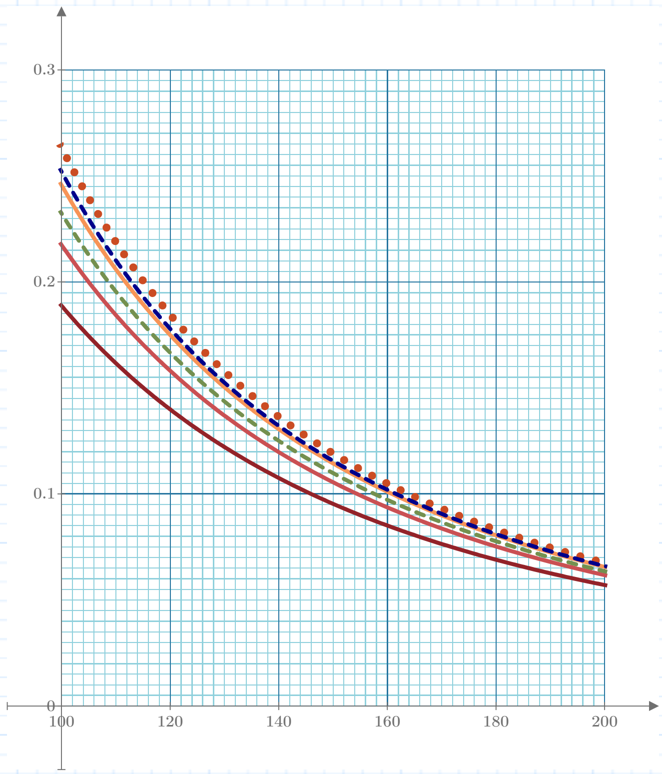
$p_1 := 300\ MPa$ $\qquad E := 70000\ MPa$ $\qquad \zeta(\lambda) := \frac{\lambda}{\pi} \cdot \sqrt{\frac{p_1}{E}}$

$$\varphi(\lambda_1, c_1, \lambda) := \frac{1}{2} \cdot \left(1 + \frac{c_1}{\zeta(\lambda)} + \frac{1 - c_1 \cdot \lambda_1}{\zeta(\lambda)^2}\right) \qquad N(\lambda_1, c_1, \lambda) := \varphi(\lambda_1, c_1, \lambda) \cdot \left(1 - \left(1 - \frac{1}{\zeta(\lambda)^2 \cdot \varphi(\lambda_1, c_1, \lambda)^2}\right)^{\frac{1}{2}}\right)$$

Create matrices for grid and subgrid $\qquad G1 := grid\left(\begin{bmatrix}100\\200\\20\end{bmatrix}, \begin{bmatrix}0\\0.3\\0.1\end{bmatrix}\right) \qquad G2 := grid\left(\begin{bmatrix}100\\200\\2\end{bmatrix}, \begin{bmatrix}0\\0.3\\0.005\end{bmatrix}\right)$

Range variable for plotting $\qquad \lambda := 90, 90.5 .. 200$

1) Use function N(...) directly with the appropriate values for λ_1 and c_1 as function arguments



$G2^{\langle 1 \rangle}$

$G1^{\langle 1 \rangle}$

$N(0.6, 0.1, \lambda)$

$N(0.2, 0.2, \lambda)$

$N(0.2, 0.45, \lambda)$

$N(0.2, 0.8, \lambda)$

$N(0.4, 0.35, \lambda)$

$N(0.6, 0.2, \lambda)$

$G2^{\langle 0 \rangle}$

$G1^{\langle 0 \rangle}$

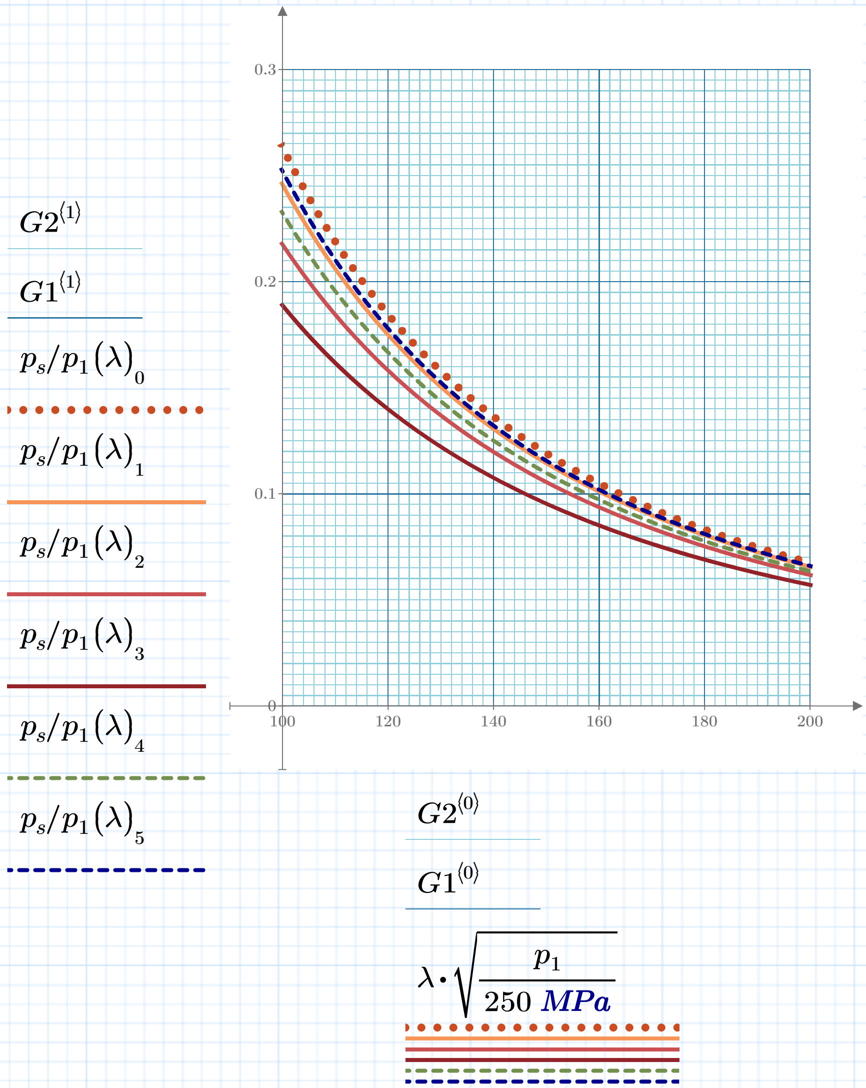
$\lambda \cdot \sqrt{\frac{p_1}{250\ MPa}}$

2) Create a vector p_s/p_1 of functions depending on the given vectors for λ_1 and c_1

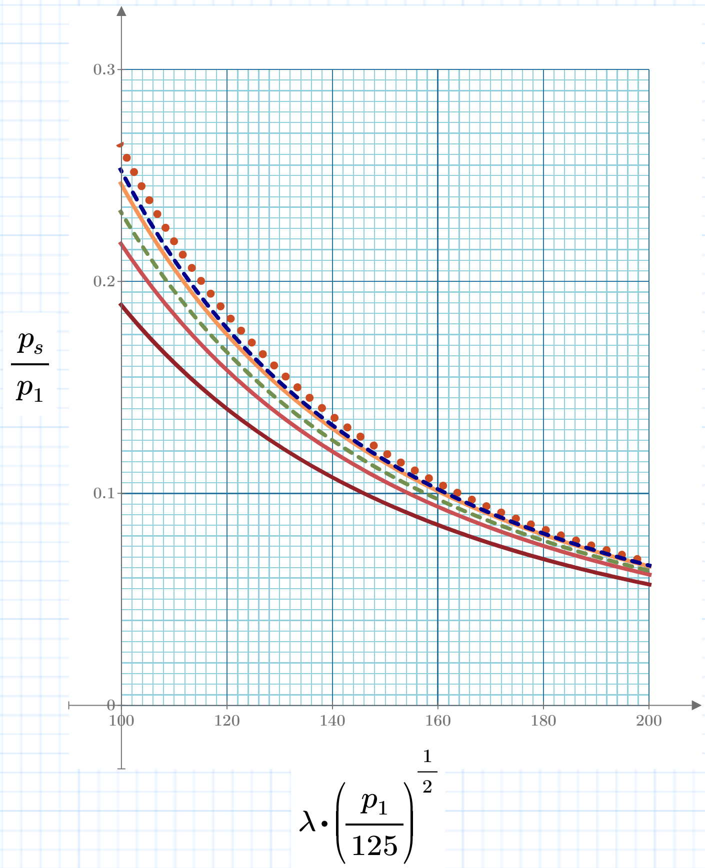
$\lambda_1 := \begin{bmatrix} 0.6 & 0.2 & 0.2 & 0.2 & 0.4 & 0.6 \end{bmatrix}^{\mathrm{T}}$ $\qquad c_1 := \begin{bmatrix} 0.1 & 0.2 & 0.45 & 0.8 & 0.35 & 0.2 \end{bmatrix}^{\mathrm{T}}$

$p_s/p_1(\lambda) := \overrightarrow{N(\lambda_1, c_1, \lambda)}$

Note that we have to vectorize the call and later have to use the matrix index on p_s/p_1, not the literal index



3) Same as 2) but with hidden "Axis Expressions" and math regions used as labels



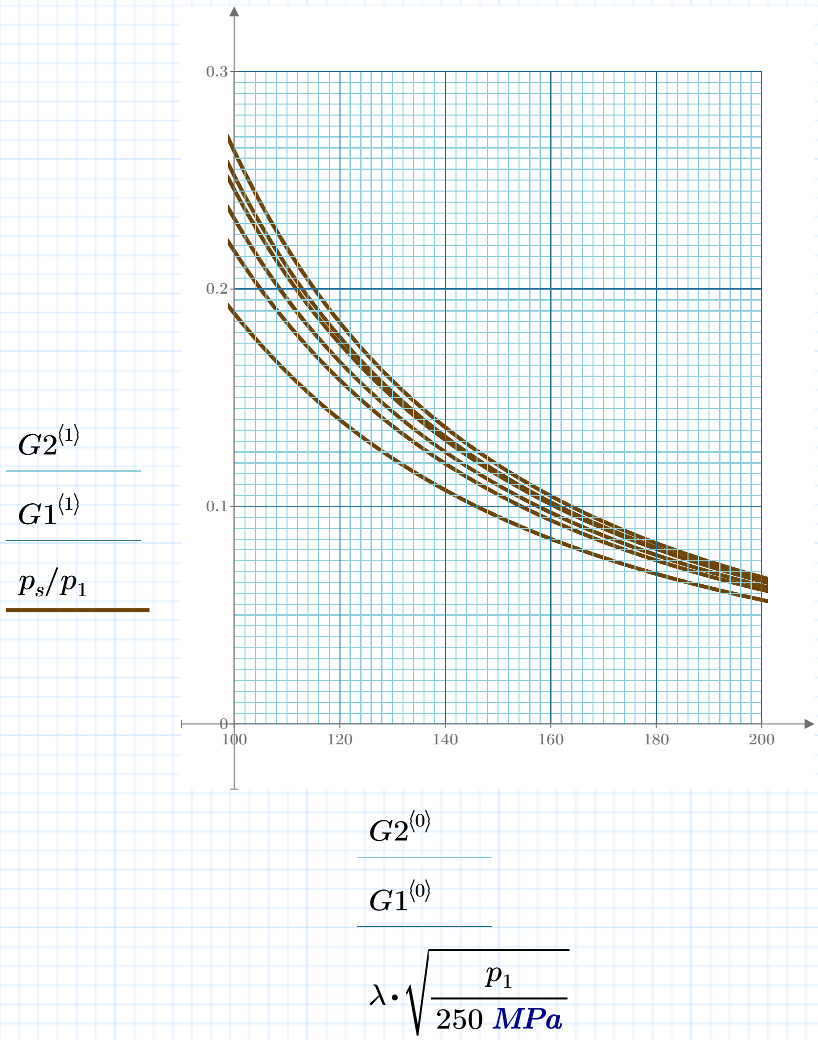
4) Create matrix for a waterfall plot

Using an undocumented trick to turn λ from a range into a vector

$$\lambda := \lambda = \begin{bmatrix} 90 \\ 90.5 \\ 91 \\ 91.5 \\ \vdots \end{bmatrix}$$

Create a matrix where every column consists of the data values of one of the λ_1-c_1 combinations:

$$p_s/p_1 := \left\| \begin{array}{l} \text{for } i \in 0 \,..\, \text{last}\left(c_1\right) \\ \quad \left\| \begin{array}{l} f(l) \leftarrow \overrightarrow{p_s/p_1(l)}_i \\ R^{\langle i \rangle} \leftarrow \overrightarrow{f(\lambda)} \end{array} \right. \\ R \end{array} \right.$$



The drawback here is, that you cannot use different line styles or colors.

Furthermore I am surprised, that now the grid is drawn OVER the curves! I don't know why.