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restart :
with(plots) :
Dummy := piecewise(c < 1000, 0, 1);
Need := [lambda0 = 0.00091, lambda1 = 0, k0 = 2.84639, k1 = 0];
NeedD := [lambda0 = 0.00047, lambda1 = 0.00056, k0 = 1.44034, k1 = 0.25428];

NoNeed := [lambda0 = 0.00085, lambda1 = 0, k0 = 1.50106, k1 = 0];
NoNeedD := [lambda0 = 0.00056, lambda1 = 0.00025, k0 = 0.87042, k1 = 1.15519];

J := 1 - exp(-( (lambda0 + lambda1·Dummy) · c)^(k0 + k1·Dummy));
PN := subs(Need, J);
PND := subs(NeedD, J);
plot([PN, PND], c = 0 .. 2000, color = [green, blue]);
DPN := diff(PN, c) :
D2PN := diff(DPN, c) :
DPND := diff(PND, c) :
D2PND := diff(DPND, c) :
plot([D2PN, D2PND], c = 100 .. 2000, color = [green, blue]);

PNoN := subs(NoNeed, J);
PNoND := subs(NoNeedD, J);
plot([PNoN, PNoND], c = 0 .. 2000, color = [green, blue]);
DPNoN := diff(PNoN, c) :
D2PNoN := diff(DPNoN, c) :
DPNoND := diff(PNoND, c) :
D2PNoND := diff(DPNoND, c) :
plot([D2PNoN, D2PNoND], c = 100 .. 2000, color = [green, blue])

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$$Dummy := \begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases}$$

$$Need := [\lambda_0 = 0.00091, \lambda_1 = 0, k_0 = 2.84639, k_1 = 0]$$

$$NeedD := [\lambda_0 = 0.00047, \lambda_1 = 0.00056, k_0 = 1.44034, k_1 = 0.25428]$$

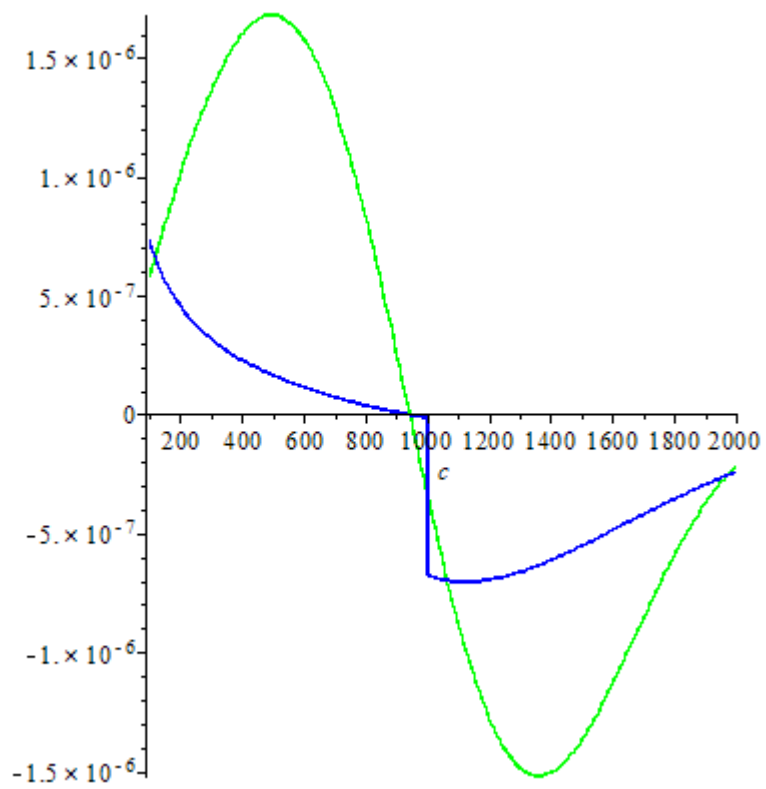
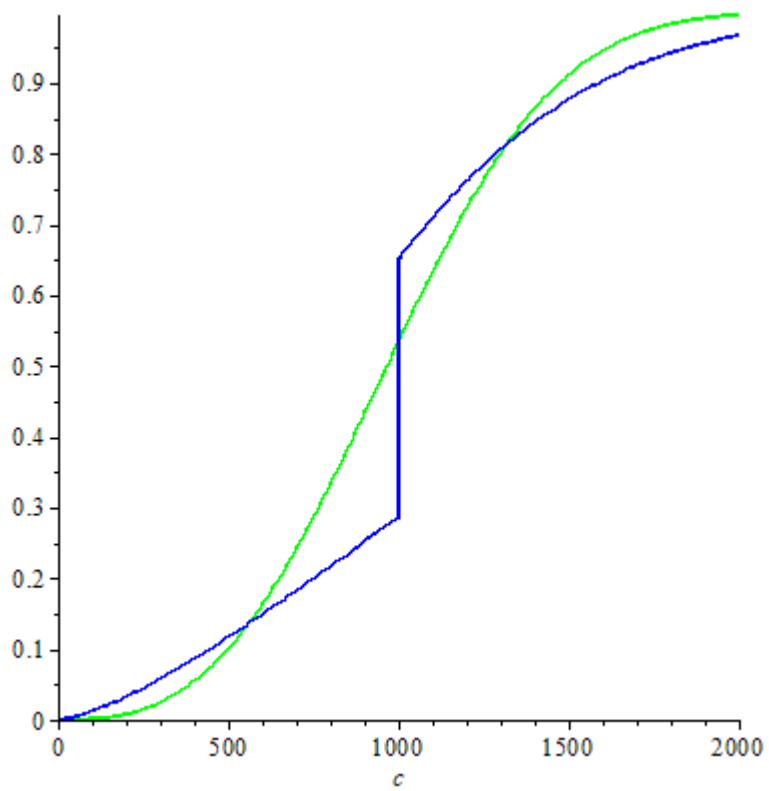
$$NoNeed := [\lambda_0 = 0.00085, \lambda_1 = 0, k_0 = 1.50106, k_1 = 0]$$

$$NoNeedD := [\lambda_0 = 0.00056, \lambda_1 = 0.00025, k_0 = 0.87042, k_1 = 1.15519]$$

$$J := 1 - e^{-\left(\left(\left(\begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases} \lambda_1 + \lambda_0 \right) c\right)^{\left(\begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases} k_1 + k_0\right)}}\right)$$

$$PN := 1 - e^{-2.209254909 \cdot 10^{-9} c^{2.84639}}$$

$$PND := 1 - e^{-\left(0.00056 \left(\begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases} + 0.00047 \right) c\right)^{0.25428 \left(\begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases} + 1.44034\right)}}$$



$$PNoN := 1 - e^{-0.00002459651471 c^{1.50106}}$$

$$P_{NoND} := 1 - e^{-\left( \left( 0.00025 \left( \begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases} \right) + 0.00056 \right) c \right)^{1.15519 \left( \begin{cases} 0 & c < 1000 \\ 1 & otherwise \end{cases} \right) + 0.87042}}$$

