```
(*Pl(mu,3)*)
n = 5;
L = Table[li, {li, {1.0, 0.6, 0.3, 0.1, 0.05, 0.05}}] *
```

$$\text{Table}\left[\frac{n!}{i!\,(n-i)!}, \{i, \{0, 1, 2, 3, 4, 5\}\}\right] * \text{Table}\left[\frac{(\mu/\mu 0)^i}{(1+\mu/\mu 0)^n}, \{i, \{0, 1, 2, 3, 4, 5\}\}\right]$$

$$\left\{\frac{1.}{\left(1+\frac{\mu}{\mu 0}\right)^5}, \frac{3.\,\mu}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0}, \frac{3.\,\mu^2}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^2}, \frac{1.\,\mu^3}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^3}, \frac{0.25\,\mu^4}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^4}, \frac{0.05\,\mu^5}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^5}\right\}$$

```
Lsim = FullSimplify[
```

$$\frac{1}{\left(1+\frac{\mu}{\mu 0}\right)^5} + \frac{3\,\mu}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0} + \frac{3\,\mu^2}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^2} + \frac{1\,\mu^3}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^3} + \frac{0.25\,\mu^4}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^4} + \frac{0.05\,\mu^5}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^5}]$$

$$\frac{0.05\,\mu^5 + 0.25\,\mu^4\,\mu 0 + 1.\,\mu^3\,\mu 0^2 + 3.\,\mu^2\,\mu 0^3 + 3.\,\mu\,\mu 0^4 + 1.\,\mu 0^5}{(\mu + \mu 0)^5}$$

```
Ym = Table[γmi, {γmi, {0, 0.04, 0.2, 1.0, 1.0, 1.0}}] *
```

$$\text{Table}\left[\frac{n!}{i!\,(n-i)!}, \{i, \{0, 1, 2, 3, 4, 5\}\}\right] * \text{Table}\left[\frac{(\mu/\mu 0)^i}{(1+\mu/\mu 0)^n}, \{i, \{0, 1, 2, 3, 4, 5\}\}\right]$$

$$\left\{0, \frac{0.2\,\mu}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0}, \frac{2.\,\mu^2}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^2}, \frac{10.\,\mu^3}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^3}, \frac{5.\,\mu^4}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^4}, \frac{1.\,\mu^5}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^5}\right\}$$

```
Ymsim =
```

$$\text{FullSimplify}\left[\frac{0.2\,\mu}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0} + \frac{2\,\mu^2}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^2} + \frac{10\,\mu^3}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^3} + \frac{5\,\mu^4}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^4} + \frac{1\,\mu^5}{\left(1+\frac{\mu}{\mu 0}\right)^5 \mu 0^5}\right]$$

$$\frac{1}{(\mu + \mu 0)^5}\,\mu\,(\mu^4 + 5.\,\mu^3\,\mu 0 + 10.\,\mu^2\,\mu 0^2 + 2.\,\mu\,\mu 0^3 + 0.2\,\mu 0^4)$$

```
(* Pl = L/(Ym+km)  *)
```

$$\text{Plmu5} = \text{FullSimplify}\left[\left(\frac{1}{(\mu+\mu 0)^5}\,(0.05\,\mu^5 + 0.25\,\mu^4\,\mu 0 + 1\,\mu^3\,\mu 0^2 + 3\,\mu^2\,\mu 0^3 + 3\,\mu\,\mu 0^4 + 1\,\mu 0^5)\right)\right/$$

$$\left(0.5 + \left(\mu\,(\mu^4 + 5\,\mu^3\,\mu 0 + 10\,\mu^2\,\mu 0^2 + 2\,\mu\,\mu 0^3 + 0.2\,\mu 0^4)\right)\right/ (\mu+\mu 0)^5\right)\Big]$$

$$\left(0.05\,\mu^5 + 0.25\,\mu^4\,\mu 0 + \mu^3\,\mu 0^2 + 3\,\mu^2\,\mu 0^3 + 3\,\mu\,\mu 0^4 + \mu 0^5\right)\Big/$$

$$\left((\mu+\mu 0)^5 \left(0.5 + \left(\mu\,(\mu^4 + 5\,\mu^3\,\mu 0 + 10\,\mu^2\,\mu 0^2 + 2\,\mu\,\mu 0^3 + 0.2\,\mu 0^4)\right)\right/ (\mu+\mu 0)^5\right)\right)$$