```
h = Flatten[Table[x^n , {n, 0, 5}]]
```

$$\{1, x, x^2, x^3, x^4, x^5\}$$

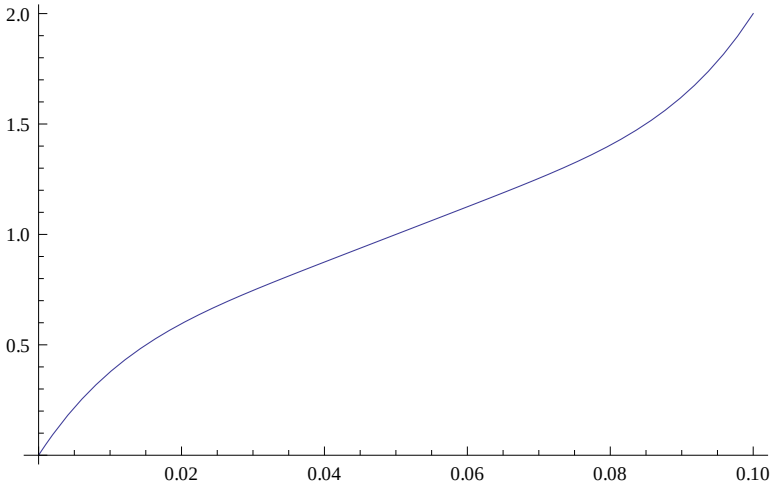
```
M = Flatten[Table[{a}, {a, 0, 2}], 1]; M // MatrixForm
```

$$\begin{pmatrix} 0 \\ 1 \\ 2 \end{pmatrix}$$

```
A[i_] := D[#, {x, M[[i]]}] &

Co = Inverse[Transpose[Flatten[Table[A[j][h] /. x → M[[i]], {j, 3}, {i, 2}], 1]]];

sc[m_ ] := DiagonalMatrix [ {1, 1, m, m, m^2, m^2}];

alexp = sc[b].Co.h /. x → y / b
```

$$\left\{1 - \frac{10\,y^3}{b^3} + \frac{15\,y^4}{b^4} - \frac{6\,y^5}{b^5},\ \frac{10\,y^3}{b^3} - \frac{15\,y^4}{b^4} + \frac{6\,y^5}{b^5},\ y - \frac{6\,y^3}{b^2} + \frac{8\,y^4}{b^3} - \frac{3\,y^5}{b^4},\right.$$
$$\left. - \frac{4\,y^3}{b^2} + \frac{7\,y^4}{b^3} - \frac{3\,y^5}{b^4},\ \frac{y^2}{2} - \frac{3\,y^3}{2\,b} + \frac{3\,y^4}{2\,b^2} - \frac{y^5}{2\,b^3},\ \frac{y^3}{2\,b} - \frac{y^4}{b^2} + \frac{y^5}{2\,b^3}\right\}$$

```
b = 0.1; s = {0, 2, 50, 50, -3000, 3000}; Plot[s.alexp, {y, 0, b}]
b =.
```




```
(*Probe:*)
Table[Table[D[{y1, y2, m1, m2, k1, k2}.alexp, {y, i}], {i, 0, 2}] /. y → j b, {j, 0, 1}]
```

{{y1, m1, k1}, {y2, m2, k2}}