

MORE ON THE 'series_op' PROCEDURE

> read series4b;

$$s_1 := 1 + a_1 x + a_2 x^2 + a_3 x^3 + a_4 x^4$$

$$s_2 := 1 + b_1 x + b_2 x^2 + b_3 x^3 + b_4 x^4$$

$$s_3 := 1 + c_1 x + c_2 x^2 + c_3 x^3 + c_4 x^4$$

> eval(series_op);

```
proc(series_in)
  solve(
    {coeffs(P(s[3])-P(series(series_in,x = 0,5)),x)},
    unknowns)
end
```

'series_op' returns a SET of equations which define the coefficients $c[1]$, $c[2]$, ... etc. in terms of the $a[i]$ and $b[i]$. To extract the value of a specific coefficient, use the 'subs' command.

Here's an example showing how to extract the coefficient $c[4]$ for the case $s[3] := 1 / s[1]$;

> subs(series_op(1 / s[1]) , c[4]);

$$-a_4 + 2 a_1 a_3 + a_2^2 - 3 a_2 a_1^2 + a_1^4$$