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[ > restart:
[ > grtw();

                                GRTensorII Version 1.79 (R6)
                                2 February 2001
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                                Latest version available from: http://grtensor.phy.queensu.ca/
                                e:/Grtii(6)/Metrics
[ > with(codegen,cost):
[ First note how cost counts:
[ > C:=x+y;

                                C := x + y
[ > codegen[cost](C);

                                additions
[ > C1:=x+y+z;

                                C1 := x + y + z
[ > codegen[cost](C1);

                                2 additions
[ > interface(labelling=false):
[ > qload(fourd);

                                Default spacetime = fourd
                                For the fourd spacetime:
                                Coordinates
                                x(up)
                                 $x^a = [x1, x2, x3, x4]$ 
                                Line element

$$ds^2 = a(x1, x2, x3, x4) dx1^2 + 2 b(x1, x2, x3, x4) dx1 dx2 + 2 c(x1, x2, x3, x4) dx1 dx3$$


$$+ 2 d(x1, x2, x3, x4) dx1 dx4 + f(x1, x2, x3, x4) dx2^2 + 2 h(x1, x2, x3, x4) dx2 dx3$$


$$+ 2 i(x1, x2, x3, x4) dx2 dx4 + j(x1, x2, x3, x4) dx3^2 + 2 k(x1, x2, x3, x4) dx3 dx4$$


$$+ l(x1, x2, x3, x4) dx4^2$$

[ > grOptionDefaultSimp:=0:
[ > grdef(`RR11:=g{^c ^d}*R{c $x1 $x1 d}`):
[ Created definition for RR11
[ > grdef(`RR12:=g{^c ^d}*R{c $x1 $x2 d}`):
[ Created definition for RR12
[ > grcalc(RR11):

                                CPU Time = .170
[ > codegen[cost](numer(grcomponent(RR11,[ ])));

                                9989 additions + 83658 functions + 79044 multiplications
[ 9989 additions=9990 terms
[ > grcalc(RR12):

                                CPU Time = .040

```

```
[ > codegen[ cost ] ( numer ( grcomponent ( RR12 , [ ] ) ) ) ;  
                                13279 additions + 111735 functions + 103936 multiplications  
[ 13279 additions=13280 terms  
  >  
  [
```