```
> with(qseries):
> with(thetaids):
> with(ramarobinsids);
```

$$[CHECKRAMIDF, Eeta, Geta, GetaB, GetaEXP, GetaL, GetaLB, GetaLEXP, MGeta, MGetaL, findtype1, findtype10, findtype2, findtype3, findtype4, findtype5, findtype6, findtype7, findtype8, findtype9, latexeta, latexetaquot, latexpm, latexprinttype1, latexprinttype10, latexprinttype2, latexprinttype3, latexprinttype4, latexprinttype5, latexprinttype6, latexprinttype7, latexprinttype8, latexprinttype9, latexprinttypeL1, latexprinttypeL10, latexprinttypeL2, latexprinttypeL3, latexprinttypeL4, latexprinttypeL5, latexprinttypeL6, latexprinttypeL7, latexprinttypeL8, latexprinttypeL9, printtype1, printtype10, printtype2, printtype3, printtype4, printtype5, printtype6, printtype7, printtype8, printtype9, printtypelist, qnr, qr, ramarobinsidschanges, ramarobinsidspversion] \quad (1)$$

```
> xprint:=false: proveit:=true:
> G:=j->1/GetaL(qr(5),5,j):H:=j->1/GetaL(qnr(5),5,j):
> GM:=j->1/MGetaL(qr(5),5,j): HM:=j->1/MGetaL(qnr(5),5,j):
> GE:=j->-GetaLEXP(qr(5),5,j):HE:=j->-GetaLEXP(qnr(5),5,j):
> G(1),H(1);
```

$$\frac{JAC(0,5,\infty)}{q^{1/60}\,JAC(1,5,\infty)}, \frac{q^{11/60}\,JAC(0,5,\infty)}{JAC(2,5,\infty)} \quad (2)$$

```
> jac2eprod(G(1)),jac2eprod(H(1));
```

$$\frac{1}{GETA(5,1)}, \frac{1}{GETA(5,2)} \quad (3)$$

```
> myramatype1:=findtype1(12);
*** There were NO errors.  Each term was modular function on
    Gamma1(30). Also -mintotord=8. To prove the identity
    we need to  check up to O(q^(10)).
    To be on the safe side we check up to O(q^(68)).
*** The identity below is PROVED!
[6, 1, -1]
```

$$\_G(6)\,\_H(1) - \_G(1)\,\_H(6) = \frac{\eta(6\tau)\,\eta(\tau)}{\eta(3\tau)\,\eta(2\tau)}$$

```
"n=", 10
*** There were NO errors.  Each term was modular function on
    Gamma1(55). Also -mintotord=40. To prove the identity
    we need to  check up to O(q^(42)).
    To be on the safe side we check up to O(q^(150)).
*** The identity below is PROVED!
[11, 1, -1]
```

$$\_G(11)\,\_H(1) - \_G(1)\,\_H(11) = 1$$

$$myramatype1 := [[6, 1, -1], [11, 1, -1]] \quad (4)$$

```
> PROVEDFL1;
```

$$[[6, 1, -1, 30, -8], [11, 1, -1, 55, -40]] \quad (5)$$

```
> latexprinttypeL1(PROVEDFL1,RR51,"TESTRR5TYPE1.txt");
> printtypelist(printtype1,PROVEDFL1, 3,1);
```

$$G(6)\,H(1) - G(1)\,H(6) = \frac{\eta(6\tau)\,\eta(\tau)}{\eta(3\tau)\,\eta(2\tau)}, \Gamma_1(30), -B = 8, \quad (3.1)$$

(6)

$$G(11)\,H(1) - G(1)\,H(11) = 1, \Gamma_1(55), -B = 40, \quad \textit{(3.2)} \tag{6}$$