CopyV2H(A7,TS1) CopyH2H(B7,TC1) **Y2** Y1 Z1 **A(P) B(P)** EXP **Z3 X1** B8 **X2** B2 n(x) n(x) n(x) n(x) P2 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 **T6** TS8 TS7 TS6 TS5 TS4 TS3 TS2 TS1 TC2 TC1 TC8 TC7 TC6 TC5 TC4 TC3 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 ModAdd(TS1,TC1) CopyH2V(B1,A7) Y1 **X2 Y2 Z3 X1 Z1 A(P) B(P) T8** EXP В8 В7 В6 B5 В3 B2 В1 n(x) n(x) n(x) n(x) P4 P2 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 TS5 TS4 TS7 TS6 TS3 TS2 TS1 TC5 TC8 TC7 TC6 TC4 TC3 TC2 TC1 23 22 21 20 19 18 17 16 15 14 13 12 11 10 T9 = E\*E\*rinvpoly CopyH2V(B5,A7) CopyH2H(B5,B7) MontMult(A7,B7,P1) **T8 Y2 Y1 Z1 A(P) B(P)** Ε **X2 Z3 X1** EXP В8 B2 В6 В1 n(x) n(x) n(x) P4 P2 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 TS8 TS7 TS6 TS5 TS4 TS3 TS2 TS1 TC8 TC7 TC6 TC5 TC4 TC3 TC2 TC1 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 T10 = T9\*E\*rinvpoly MontMult(A7,B7,P1) **X2 Y2 Z3 X1** Y1 **Z1 A(P) B(P)** Е EXP В8 В7 В6 B5 B2 В1 n(x) n(x) n(x) n(x) P4 P2 P6 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 TS8 TS6 TS5 TS4 TS1 TS7 TS3 TC5 TC4 TC3 TC1 TC7 TC2 TC8 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 X3 = T8+T10CopyH2H(B1,TS1) CopyH2H(B7,TC1) T10 **A(P) B(P) X2 Y2 Z3 X1 Y1 Z1** Ε EXP В8 В7 В6 B5 В3 B2 В1 n(x) n(x) n(x) n(x) Р8 P6 P4 P2 P1 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 T8 TS5 TS3 TS2 TS1 TS8 TS7 TS6 TS4 23 21 19 T10 TC5 TC4 TC3 TC2 TC1 TC8 TC7 TC6 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 ModAdd(TS1,TC1) CopyH2V(B1,X7) X3 **Y2 Y1 A(P) B(P)** B2 **Z3 X1 Z1 EXP X3** n(x) n(x) n(x) n(x) Р6 P4 P2 P1 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 TS8 TS7 TS6 TS5 TS4 TS3 TS2 TS1 TC8 TC7 TC6 TC5 TC4 TC3 TC2 TC1 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 T11 = I\*X3\*rinvpoly CopyV2H(A5,B1) MontMult(X7,B1,P1) CopyH2V(B1,A7) CopyH2H(B1,B7) **Y2 X3 Z3 X1 Y1 Z1 A(P) B(P)** T11 EXP В8 В7 В6 B5 B2 В1 n(x) n(x) n(x) n(x) P4 P2 P1 Р8 P7 P6 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 TS4 TS7 TS6 TS5 TS3 TS2 TS1 TS8 23 TC5 TC4 TC3 TC1 TC8 TC7 TC6 TC2 23 22 21 20 19 18 17 16 15 14 13 12 11 10 T12 = G\*G\*rinvpoly CopyH2V(B3,A7) MontMult(A7,B3,P1) T11 **X3 X3 Y2 Z3 X1 Y1 Z1 A(P) B(P)** G EXP В8 В7 В6 В5 B2 В1 n(x) n(x) n(x) n(x) P4 P2 P1 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 TS8 TS7 TS6 TS5 TS4 TS3 TS2 TS1 23 21 19 TC3 TC8 TC7 TC6 TC5 TC4 TC2 TC1 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 T13 = T12\*H\*rinvpoly MontMult(A3,B3,P1) **X3** T11 **A(P) B(P) X3 Y2 Z3 X1** Y1 **Z1** G EXP В7 ВЗ B2 В1 n(x) n(x) n(x) n(x) P2 P4 P1 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 TS5 TS4 TS3 TS8 TS7 TS6 TS2 TS1 23 21 19 17 TC7 TC6 TC5 TC4 TC3 TC2 TC1 TC8 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 Y3 = T11+T13CopyH2H(B7,TS1) CopyH2H(B3,TC1) T11 **X3** A(P) B(P) Х3 **Y2 Y1** EXP **Z3** 7 **n(x)** n(x) n(x) n(x) P4 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 T11 TS2 TS7 TS6 TS5 TS4 TS3 TS1 TS8 19 T13 TC5 TC4 TC2 TC8 TC7 TC6 TC3 TC1 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 ModAdd(TS1,TC1) CopyH2V(B1,X5) T11 **A(P) B(P) X3 Y3 Z3 X1 Y1** Z1 G EXP В8 В7 В6 B5 В3 B2 В1 n(x) n(x) n(x) n(x) P4 P2 X8 X7 X6 X5 X4 X3 X2 X1 E8 E7 E6 E5 E4 E3 E2 E1 A8 A7 A6 A5 A4 A3 A2 A1 TS7 TS6 TS5 TS4 TS3 TS2 TS1 TS8 23 19 17 TC7 TC6 TC5 TC4 TC3 TC2 TC1 TC8 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9

All Steps are: