```
In[@]:= SetOptions[SelectedNotebook[],
                     PrintingStyleEnvironment → "Printout", ShowSyntaxStyles → True]
                  (*Importing RISC packages*)
In[*]:= << RISC`qMultiSum`</pre>
                 << RISC`qGeneratingFunctions`
                     qMultiSum Package version 2.54
                     written by Axel Riese
                     Copyright Research Institute for Symbolic Computation (RISC),
                     Johannes Kepler University, Linz, Austria
                     qGeneratingFunctions Package version 1.9.1
                     written by Christoph Koutschan
                     Copyright Research Institute for Symbolic Computation (RISC),
                     Johannes Kepler University, Linz, Austria
                  ln[=]:= MyQP[A_, q_, n_] := \prod_{k=0}^{n-1} (1 - A q^k);
                ClearAll[M, N1, N2, N3, N4, N5];
                For M = 0, M \le 10, M + +,
                   S = \sum_{N3=0}^{\text{Floor}} \sum_{N1=0}^{\frac{M}{2}} \sum_{N2=0}^{M-2} \sum_{N2=0}^{N3-N1} \sum_{N4=0}^{M-2} \left(-1\right)^{N1+N2} z 1^{N1+N3+N4} z 2^{N2+N3+(M-N1-N2-2N3-N4)}
                                             \boldsymbol{q}^{N1^2+N2^2+N3^2+N4^2+(M-N1-N2-2\,N3-N4)^2+N1\,N2+N1\,N3+N1\,(M-N1-N2-2\,N3-N4)+N2\,N3+N2\,N4+N3\,N4+N3\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-N4)+N4\,(M-N1-N2-2\,N3-2\,N4)+N4\,(M-N1-N2-2\,N3-2\,N4)+N4\,(M-N1-N2-2\,N3-2\,N4)+N4\,(M-N1-N2-2\,N3-2\,N4)+N4\,(M-N1-N2-2\,N3-2\,N4)+N4\,(M
                                                / (MyQP[q<sup>2</sup>, q<sup>2</sup>, N1] MyQP[q<sup>2</sup>, q<sup>2</sup>, N2] MyQP[q<sup>2</sup>, q<sup>2</sup>, N3]
                                                         MyQP[q^2, q^2, N4] MyQP[q^2, q^2, (M-N1-N2-2N3-N4)]);
                     Print[Factor[S]];
```

```
1
                                     z1 + z2
                               \frac{q \; \left(z1-z2\right){}^{2}}{\left(-1+q\right) \; \left(1+q\right){}^{2}}
                              q^2 (q z1 - z2) (z1 + z2) (-z1 + q z2)
                                                    (-1+q) (1+q)^3 (1-q+q^2)
                              -\frac{q^{4} \; \left(z1-z2\right){}^{2} \; \left(q^{2} \; z1-z2\right) \; \left(-z1+q^{2} \; z2\right)}{}
                                     (-1+q)^{2}(1+q)^{4}(1+q^{2})(1-q+q^{2})
                              -\frac{q^{6} \ \left( q \ z1-z2 \right) \ \left( q^{3} \ z1-z2 \right) \ \left( z1+z2 \right) \ \left( -z1+q \ z2 \right) \ \left( -z1+q^{3} \ z2 \right) }{}
                                        (-1+q)^2 (1+q)^5 (1+q^2) (1-q+q^2) (1-q+q^2-q^3+q^4)
                                            q^{9} \; \left(z1-z2\right)^{\; 2} \; \left(q^{2} \; z1-z2\right) \; \left(q^{4} \; z1-z2\right) \; \left(-z1+q^{2} \; z2\right) \; \left(-z1+q^{4} \; z2\right)
                               (-1+q)^3 (1+q)^6 (1+q^2) (1-q+q^2)^2 (1+q+q^2) (1-q+q^2-q^3+q^4)
                                                         q^{12} \  \, \left( \, q \,\, z \, 1 \, - \, z \, 2 \, \right) \  \, \left( \, q^{3} \,\, z \, 1 \, - \, z \, 2 \, \right) \  \, \left( \, q^{5} \,\, z \, 1 \, - \, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{3} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,\, z \, 2 \, \right) \  \, \left( \, - \, z \, 1 \, + \, q^{5} \,
                               -\left( \left( q^{16} \; \left( z1-z2 \right)^{2} \; \left( q^{2} \; z1-z2 \right) \; \left( q^{4} \; z1-z2 \right) \; \left( q^{6} \; z1-z2 \right) \; \left( -z1+q^{2} \; z2 \right) \; \left( -z1+q^{4} \; z2 \right) \; \left( -z1+q^{6} \; z2 \right) \right) \right/ \left( \left( -1+q \right)^{4} \; z^{2} \right) \left( -z^{2} \; z^{2} \; z^{2} \; z^{2} \; z^{2} \right) \left( -z^{2} \; z^{2} \; z^{2} \; z^{2} \; z^{2} \; z^{2} \right) \left( -z^{2} \; z^{2} \; z^{2} \; z^{2} \; z^{2} \; z^{2} \right) \left( -z^{2} \; z^{2} \;
                                                                \left(1+q\right)^{8}\,\left(1+q^{2}\right)^{2}\,\left(1-q+q^{2}\right)^{2}\,\left(1+q+q^{2}\right)\,\left(1+q^{4}\right)\,\left(1-q+q^{2}-q^{3}+q^{4}\right)\,\left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right)\,\right)
                             \left(-z\mathbf{1}+q^{3}\ z\mathbf{2}\right)\ \left(-z\mathbf{1}+q^{5}\ z\mathbf{2}\right)\ \left(-z\mathbf{1}+q^{7}\ z\mathbf{2}\right)\right)\left/\left(\ \left(-\mathbf{1}+q\right)^{4}\ \left(\mathbf{1}+q\right)^{9}\ \left(\mathbf{1}+q^{2}\right)^{2}\ \left(\mathbf{1}-q+q^{2}\right)^{3}\right)\right.
                                                              (q^{25} (z1-z2)^2 (q^2 z1-z2) (q^4 z1-z2) (q^6 z1-z2)
                                                   \left( \; \left( \; -1 \; + \; q \right) \; ^{5} \; \left( \; 1 \; + \; q \right) \; ^{10} \; \left( \; 1 \; + \; q^{2} \right) \; ^{2} \; \left( \; 1 \; - \; q \; + \; q^{2} \right) \; ^{3} \; \left( \; 1 \; + \; q \; + \; q^{2} \right) \; \left( \; 1 \; + \; q^{4} \right) \; \left( \; 1 \; - \; q \; + \; q^{2} \; - \; q^{3} \; + \; q^{4} \right) \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{2} \; ^{
                                                  \left(1+q+q^2+q^3+q^4\right)\;\left(1-q^3+q^6\right)\;\left(1-q+q^2-q^3+q^4-q^5+q^6\right)\left)
                               (*Initial values of T
_M, using the rewritten formula*)
ln[*]:= MyQP[A_, q_, n_] := \prod_{k=0}^{n-1} (1 - A q^k);
                            ClearAll[M, N1, N2, N3, N4, N5];
                             SList = {};
                            For M = 0, M \le 10, M++,
                                  MyQP \left[-z1\ z2^{-1}\ q^{1+2\ N2+2\ N3-M},\ q^2,\ M-N1-N2-2\ N3\right]
                                                                                 (MyQP[q^2, q^2, N1] MyQP[q^2, q^2, N2] MyQP[q^2, q^2, N3] MyQP[q^2, q^2, M-N1-N2-2N3]);
                                    Print[Factor[S]];
                                    SList = Append[SList, Factor[S]];
```

```
VOA-T-tilde.nb | 3
   (q^{12} (q z1 - z2) (q^3 z1 - z2) (q^5 z1 - z2) (z1 + z2) (-z1 + q z2) (-z1 + q^3 z2) (-z1 + q^5 z2)) / 
            \left( \ \left( -1+q \right)^{3} \ \left( 1+q \right)^{7} \ \left( 1+q^{2} \right) \ \left( 1-q+q^{2} \right)^{2} \ \left( 1+q+q^{2} \right) \ \left( 1-q+q^{2}-q^{3}+q^{4} \right) \ \left( 1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6} \right) \right) \right) 
-\left( \left( q^{16} \, \left( z1-z2 \right)^{2} \, \left( q^{2} \, z1-z2 \right) \, \left( q^{4} \, z1-z2 \right) \, \left( q^{6} \, z1-z2 \right) \, \left( -z1+q^{2} \, z2 \right) \, \left( -z1+q^{4} \, z2 \right) \, \left( -z1+q^{6} \, z2 \right) \right) \, / \left( \left( -1+q \right)^{4} \, z^{2} \right) \, / \left( -z^{2} \, z^{2} \, z^{2} \, z^{2} \right) \, / \left( -z^{2} \, z^{2} \, z^{2} \, z^{2} \, z^{2} \, z^{2} \right) \, / \left( -z^{2} \, z^{2} \,
                                                         (-z1 + q^3 z2) (-z1 + q^5 z2) (-z1 + q^7 z2)) / ((-1 + q)^4 (1 + q)^9 (1 + q^2)^2 (1 - q + q^2)^3
                                                        \left(1+q+q^{2}\right) \; \left(1+q^{4}\right) \; \left(1-q+q^{2}-q^{3}+q^{4}\right) \; \left(1-q^{3}+q^{6}\right) \; \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \right) \; \\ \left(1+q+q^{2}\right) \; \left(1+q^{4}\right) \; \left(1-q+q^{2}-q^{3}+q^{4}\right) \; \left(1-q^{3}+q^{6}\right) \; \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \\ \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \\ \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \\ \left(1-q+q^{2}-q^{3}+q^{4}-q^{5}+q^{6}\right) \; \left(1-q+q^{2}-q^{3}+q^{6}-q^{5}+q^{6}\right) \; \\ \left(1-q+q^{2}-q^{3}+q^{6}-q^{5}+q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}-q^{6}
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\left(q^{8}\;z\mathbf{1}-z\mathbf{2}\right)\;\left(-z\mathbf{1}+q^{2}\;z\mathbf{2}\right)\;\left(-z\mathbf{1}+q^{4}\;z\mathbf{2}\right)\;\left(-z\mathbf{1}+q^{6}\;z\mathbf{2}\right)\;\left(-z\mathbf{1}+q^{8}\;z\mathbf{2}\right)\right)\;/
        ((-1+q)^5(1+q)^{10}(1+q^2)^2(1-q+q^2)^3(1+q+q^2)(1+q^4)(1-q+q^2-q^3+q^4)^2
           (1+q+q^2+q^3+q^4) (1-q^3+q^6) (1-q+q^2-q^3+q^4-q^5+q^6)
       (*Recurrence for T M, with M odd*)
In[125]:= ClearAll[M, N1, N2, N3, N4, N5, z];
       summand =
          (-1)^{N1+N2} z^{N1+N3} q^{-N1-M N1+N1^2-N2-2 M N2+2 N1 N2+2 N2^2-3 M N3+2 N1 N3+4 N2 N3+3 N3^2} qPochhammer [-z q^{1+2 N2+2 N3-M}]
               q^2, M - N1 - N2 - 2 N3 / (qPochhammer [q^2, q^2, N1] qPochhammer [q^2, q^2, N2]
                 qPochhammer [q^2, q^2, N3] qPochhammer [q^2, q^2, M-N1-N2-2N3]) /. \{M \rightarrow 2M+1\};
      stru = qFindStructureSet[summand, {M}, {N1, N2, N3}, {2}, {2, 2, 2},
           {1, 1, 1}, qProtocol → True];
       rec = qFindRecurrence[summand, {M}, {N1, N2, N3}, {2}, {2, 2, 2},
           {1, 1, 1}, qProtocol → True, StructSet → stru[[1]]];
       sumrec = qSumRecurrence[rec]
      Structure set (600 elts.):
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         \{2, 1, 0, 0\}, \{2, 1, 0, 1\}, \{2, 1, 1, 0\}, \{2, 1, 1, 1\}, \{2, 1, 2, 0\}, \{2, 2, 0, 0\}, \{2, 2, 0, 1\},
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```

1

z1 + z21 + q

 $q (z1 - z2)^2$ $(-1+q)(1+q)^2$

 $q^2 (q z1 - z2) (z1 + z2) (-z1 + q z2)$ $(-1+q) (1+q)^3 (1-q+q^2)$ $q^4 (z1 - z2)^2 (q^2 z1 - z2) (-z1 + q^2 z2)$ $(-1+q)^2 (1+q)^4 (1+q^2) (1-q+q^2)$

 q^{6} (qz1-z2) $(q^{3}z1-z2)$ (z1+z2) (-z1+qz2) $(-z1+q^{3}z2)$ $(-1+q)^2 (1+q)^5 (1+q^2) (1-q+q^2) (1-q+q^2-q^3+q^4)$

 $(q^{25} (z1-z2)^2 (q^2 z1-z2) (q^4 z1-z2) (q^6 z1-z2)$

 $q^{9} \; \left(z1-z2\right){}^{2} \; \left(q^{2} \; z1-z2\right) \; \left(q^{4} \; z1-z2\right) \; \left(-z1+q^{2} \; z2\right) \; \left(-z1+q^{4} \; z2\right)$ $(-1+q)^3 (1+q)^6 (1+q^2) (1-q+q^2)^2 (1+q+q^2) (1-q+q^2-q^3+q^4)$

 $-\left(\left(q^{20} \; \left(q \; z1-z2 \right) \; \left(q^3 \; z1-z2 \right) \; \left(q^5 \; z1-z2 \right) \; \left(q^7 \; z1-z2 \right) \; \left(z1+z2 \right) \; \left(-z1+q \; z2 \right) \right) \right) + \left(-z^2 + z^2 \right) + \left(-z^2 + z$

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\{10, 6, 2, 4\}, \{10, 6, 2, 6\}, \{10, 6, 3, 3\}, \{10, 6, 4, 2\}, \{10, 6, 5, 3\}, \{10, 6, 6, 3\},
\{11, 4, 2, 8\}, \{11, 4, 4, 4\}, \{11, 4, 4, 5\}, \{11, 4, 5, 5\}, \{11, 5, 1, 8\}, \{11, 5, 2, 6\},
\{11, 5, 2, 7\}, \{11, 5, 3, 4\}, \{11, 5, 4, 4\}, \{11, 5, 5, 4\}, \{11, 6, 1, 6\}, \{11, 6, 2, 5\},
\{11, 6, 2, 7\}, \{11, 6, 3, 4\}, \{11, 6, 4, 3\}, \{11, 6, 5, 4\}, \{11, 6, 6, 4\}, \{12, 5, 5, 5\},
\{12, 6, 2, 8\}, \{12, 6, 4, 4\}, \{12, 6, 5, 5\}, \{12, 6, 6, 5\}, \{13, 6, 5, 6\}, \{13, 6, 6, 6\}\}
```

Setting up equations

Eliminating trivial equations

Starting equation solver

Dimension of matrix: 11346x3116

Simplifying 1 solution(s)

Solution exists

```
Structure set (143 elts.):
 \{\{0,0,0,0\},\{1,0,0,0\},\{1,0,0,1\},\{1,0,1,0\},\{1,0,2,0\},\{1,1,0,0\},\{1,1,1,0\},
  \{1, 2, 0, 0\}, \{2, 0, 0, 0\}, \{2, 0, 0, 1\}, \{2, 0, 0, 2\}, \{2, 0, 1, 0\}, \{2, 0, 1, 1\}, \{2, 0, 2, 0\},
  \{2, 0, 2, 1\}, \{2, 1, 0, 0\}, \{2, 1, 0, 1\}, \{2, 1, 1, 0\}, \{2, 1, 1, 1\}, \{2, 1, 2, 0\}, \{2, 2, 0, 0\},
  \{2, 2, 0, 1\}, \{2, 2, 1, 0\}, \{2, 3, 0, 0\}, \{3, 0, 0, 1\}, \{3, 0, 0, 2\}, \{3, 0, 0, 3\}, \{3, 0, 1, 0\},
  \{3, 0, 1, 1\}, \{3, 0, 1, 2\}, \{3, 0, 2, 0\}, \{3, 0, 2, 1\}, \{3, 0, 2, 2\}, \{3, 1, 0, 0\}, \{3, 1, 0, 1\},
  \{3, 1, 0, 2\}, \{3, 1, 1, 0\}, \{3, 1, 1, 1\}, \{3, 1, 1, 2\}, \{3, 1, 2, 0\}, \{3, 1, 2, 1\}, \{3, 2, 0, 0\},
  \{3, 2, 0, 1\}, \{3, 2, 0, 2\}, \{3, 2, 1, 0\}, \{3, 2, 1, 1\}, \{3, 2, 2, 0\}, \{3, 3, 0, 0\}, \{3, 3, 0, 1\},
  \{3, 3, 1, 0\}, \{4, 0, 0, 2\}, \{4, 0, 0, 3\}, \{4, 0, 0, 4\}, \{4, 0, 1, 1\}, \{4, 0, 1, 2\}, \{4, 0, 1, 3\},
  \{4, 0, 2, 1\}, \{4, 0, 2, 2\}, \{4, 0, 2, 3\}, \{4, 1, 0, 1\}, \{4, 1, 0, 2\}, \{4, 1, 0, 3\}, \{4, 1, 1, 0\},
  \{4, 1, 1, 1\}, \{4, 1, 1, 2\}, \{4, 1, 1, 3\}, \{4, 1, 2, 0\}, \{4, 1, 2, 1\}, \{4, 1, 2, 2\}, \{4, 2, 0, 0\},
  \{4, 2, 0, 1\}, \{4, 2, 0, 2\}, \{4, 2, 0, 3\}, \{4, 2, 1, 0\}, \{4, 2, 1, 1\}, \{4, 2, 1, 2\}, \{4, 2, 2, 0\},
  \{4, 2, 2, 1\}, \{4, 3, 0, 0\}, \{4, 3, 0, 1\}, \{4, 3, 0, 2\}, \{4, 3, 1, 0\}, \{4, 3, 1, 1\}, \{4, 3, 2, 0\},
  \{5, 0, 0, 3\}, \{5, 0, 0, 4\}, \{5, 0, 0, 5\}, \{5, 0, 1, 2\}, \{5, 0, 1, 3\}, \{5, 0, 1, 4\}, \{5, 0, 2, 2\},
  \{5, 0, 2, 3\}, \{5, 1, 0, 2\}, \{5, 1, 0, 3\}, \{5, 1, 0, 4\}, \{5, 1, 1, 1\}, \{5, 1, 1, 2\}, \{5, 1, 1, 3\},
  \{5, 1, 1, 4\}, \{5, 1, 2, 1\}, \{5, 1, 2, 2\}, \{5, 1, 2, 3\}, \{5, 2, 0, 1\}, \{5, 2, 0, 2\}, \{5, 2, 0, 3\},
  \{5, 2, 1, 0\}, \{5, 2, 1, 1\}, \{5, 2, 1, 2\}, \{5, 2, 1, 3\}, \{5, 2, 2, 0\}, \{5, 2, 2, 1\}, \{5, 2, 2, 2\},
  \{5, 3, 0, 1\}, \{5, 3, 0, 2\}, \{5, 3, 1, 0\}, \{5, 3, 1, 1\}, \{5, 3, 1, 2\}, \{5, 3, 2, 0\}, \{5, 3, 2, 1\},
  \{6, 0, 0, 5\}, \{6, 0, 0, 6\}, \{6, 0, 1, 4\}, \{6, 0, 1, 5\}, \{6, 0, 2, 3\}, \{6, 0, 2, 4\},
  \{6, 1, 0, 4\}, \{6, 1, 0, 5\}, \{6, 1, 1, 3\}, \{6, 1, 1, 4\}, \{6, 1, 2, 2\}, \{6, 1, 2, 3\},
  \{6, 2, 0, 3\}, \{6, 2, 0, 4\}, \{6, 2, 1, 2\}, \{6, 2, 1, 3\}, \{6, 2, 2, 1\}, \{6, 2, 2, 2\},
  \{6, 3, 0, 2\}, \{6, 3, 0, 3\}, \{6, 3, 1, 1\}, \{6, 3, 1, 2\}, \{6, 3, 2, 0\}, \{6, 3, 2, 1\}\}
```

Setting up equations

Eliminating trivial equations

Starting equation solver

Dimension of matrix: 3104x1095

Simplifying 1 solution(s)

```
 \text{Out} \text{[129]= } \left\{ -q^4 \left( q^{1+2\,M} - z \right) \left( q^{3+2\,M} - z \right) \left( q^{6+2\,M} - z \right) \ z^3 \left( -1 + q^{1+2\,M} \, z \right) \ \left( -1 + q^{3+2\,M} \, z \right) \ \left( -1 + q^{5+2\,M} \, z \right) \ \text{SUM} \left[ M \right] - 1 \right\} \right\} 
                                                                                                                                                                                                                                                               q^{6\,M}\,\left(\,q^{3+2\,M}\,-\,z\,\right)\,\,z^{2}\,\left(\,-\,1\,+\,q^{3+2\,M}\,\,z\,\right)\,\,\left(\,-\,1\,+\,q^{5+2\,M}\,\,z\,\right)
                                                                                                                                                                                                                                                                                              \left(q^{13+4\,\text{M}}+q^{15+4\,\text{M}}+q^{17+4\,\text{M}}-q^{5+2\,\text{M}}\,z-q^{7+2\,\text{M}}\,z-q^{8+2\,\text{M}}\,z-q^{9+2\,\text{M}}\,z-q^{10+2\,\text{M}}\,z-q^{11+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{12+2\,\text{M}}\,z-q^{1
                                                                                                                                                                                                                                                                                                                                                     q^{14+2\,M}\,z\,-\,q^{16+2\,M}\,z\,-\,q^{2\theta+6\,M}\,z\,+\,2\,q^{21+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,q^{23+6\,M}\,z\,+\,z^2\,+\,q^2\,z^2\,+\,q^4\,z^2\,+\,q^6\,z^2\,+\,q^{22+6\,M}\,z\,+\,q^{23+6\,M}\,z\,+\,z^2\,+\,q^2\,z^2\,+\,q^4\,z^2\,+\,q^6\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,
                                                                                                                                                                                                                                                                                                                                                         q^{8} z^{2} + q^{10} z^{2} + q^{12+4\,M} z^{2} + q^{14+4\,M} z^{2} + q^{17+4\,M} z^{2} - q^{7+2\,M} z^{3} - q^{9+2\,M} z^{3} - q^{11+2\,M} z^{3} \big) \ SUM [1+M] + q^{10} z^{2} 
                                                                                                                                                                                                                                                               q^{4+12\,\text{M}} z \left(-1+q^{5+2\,\text{M}} z \right) \left(-q^{22+6\,\text{M}}-q^{24+6\,\text{M}}-q^{26+6\,\text{M}}+q^{12+4\,\text{M}} z +q^{14+4\,\text{M}} z +q^{15+4\,\text{M}} z +2 q^{16+4\,\text{M}} z +q^{16+4\,\text{M}} z +q^{16+4\,\text{M}
                                                                                                                                                                                                                                                                                                                                                     2 q^{17+4} + z + q^{18+4} + z + 3 q^{19+4} + z + q^{20+4} + z + 3 q^{21+4} + z + 2 q^{23+4} + z + q^{25+4} + z + q^{29+8} + z - 2 q^{30+8} + z + q^{20+4} + q^{20+4
                                                                                                                                                                                                                                                                                                                                                     3\,q^{31+8\,M}\,z\,-\,4\,q^{32+8\,M}\,z\,+\,2\,q^{33+8\,M}\,z\,-\,2\,q^{34+8\,M}\,z\,-\,q^{36+8\,M}\,z\,-\,q^{5+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,3\,q^{9+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2\,q^{7+2\,M}\,z^2\,-\,2
                                                                                                                                                                                                                                                                                                                                                     q^{10+2\,\text{M}}\,z^2-4\,q^{11+2\,\text{M}}\,z^2-q^{12+2\,\text{M}}\,z^2-4\,q^{13+2\,\text{M}}\,z^2-2\,q^{14+2\,\text{M}}\,z^2-3\,q^{15+2\,\text{M}}\,z^2-2\,q^{16+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+2\,\text{M}}\,z^2-2\,q^{17+
                                                                                                                                                                                                                                                                                                                                                     2\ a^{18+2\ \text{M}}\ z^2-a^{19+2\ \text{M}}\ z^2-a^{20+2\ \text{M}}\ z^2-a^{22+2\ \text{M}}\ z^2-a^{19+6\ \text{M}}\ z^2-2\ q^{21+6\ \text{M}}\ z^2-2\ q^{23+6\ \text{M}}\ z^2-2\ q^{24+6\ \text{M}}\ z^2+a^{24+6\ \text{M}}\ z^2-a^{24+6\ \text{M
                                                                                                                                                                                                                                                                                                                                                     2\,q^{25+6\,M}\,z^2-4\,q^{26+6\,M}\,z^2+4\,q^{27+6\,M}\,z^2-3\,q^{28+6\,M}\,z^2+3\,q^{29+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{32+6\,M}\,z^2+2\,q^{37+10\,M}\,z^2-q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+6\,M}\,z^2+q^{31+
                                                                                                                                                                                                                                                                                                                                                     3q^{38+10} M z^2 + 5q^{39+10} M z^2 - 3q^{40+10} M z^2 + 2q^{41+10} M z^2 + z^3 + q^2z^3 + 2q^4z^3 + 2q^6z^3 + 3q^8z^3 + 2q^4z^3 + 2q^4z
                                                                                                                                                                                                                                                                                                                                                     2\,q^{10}\,z^3 + 2\,q^{12}\,z^3 + q^{14}\,z^3 + q^{16}\,z^3 + q^{12+4\,\text{M}}\,z^3 + 3\,q^{14+4\,\text{M}}\,z^3 + 5\,q^{16+4\,\text{M}}\,z^3 + 5\,q^{18+4\,\text{M}}\,z^3 + q^{19+4\,\text{M}}\,z^3 + q^
                                                                                                                                                                                                                                                                                                                                                     3\ q^{20+4}\ z^3+q^{21+4}\ z^3+2\ q^{22+4}\ z^3+q^{23+4}\ z^3-q^{24+4}\ z^3+q^{25+4}\ z^3-q^{26+4}\ z^3-q^{28+8}\ z^3-q^{28+8}
                                                                                                                                                                                                                                                                                                                                                     q^{29+8\,\text{M}}\,z^3-3\,q^{32+8\,\text{M}}\,z^3+2\,q^{33+8\,\text{M}}\,z^3-4\,q^{34+8\,\text{M}}\,z^3+q^{35+8\,\text{M}}\,z^3-2\,q^{36+8\,\text{M}}\,z^3-q^{7+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{M}}\,z^4-2\,q^{9+2\,\text{
                                                                                                                                                                                                                                                                                                                                                         3\ q^{11+2\ M}\ z^4-3\ q^{13+2\ M}\ z^4-3\ q^{15+2\ M}\ z^4-2\ q^{17+2\ M}\ z^4-q^{19+2\ M}\ z^4-q^{21+6\ M}\ z^4-2\ q^{23+6\ M}\ z^4+q^{24+6\ M}\ z^4-q^{24+6\ M}\ z^4-q^{24+
                                                                                                                                                                                                                                                                                                                                                         q^{25+6\,M}\,z^4+q^{27+6\,M}\,z^4+q^{28+6\,M}\,z^4+q^{30+6\,M}\,z^4+q^{16+4\,M}\,z^5+q^{18+4\,M}\,z^5+q^{20+4\,M}\,z^5\big)\,\,SUM\,[\,2+M\,]\,-
                                                                                                                                                                                                                                                               q^{16+18\,\text{M}} \, \left( \, q^{28+6\,\text{M}} - q^{16+4\,\text{M}} \, z - q^{18+4\,\text{M}} \, z - q^{19+4\,\text{M}} \, z - q^{20+4\,\text{M}} \, z - 2 \, q^{21+4\,\text{M}} \, z - q^{22+4\,\text{M}} \, z - 2 \, q^{23+4\,\text{M}} \, z - 2 \, q^{23+
                                                                                                                                                                                                                                                                                                                                                     2 a^{25+4} M z - a^{27+4} M z - a^{35+8} M z + 3 a^{36+8} M z - 2 a^{37+8} M z + 3 a^{38+8} M z + 2 a^{40+8} M z + a^{42+8} M z + a^{7+2} M z^2 + a^{40+8} M z + a^{42+8} M z + a^{42+8}
                                                                                                                                                                                                                                                                                                                                                         2\,q^{9+2\,M}\,z^2 + 3\,q^{11+2\,M}\,z^2 + q^{12+2\,M}\,z^2 + 4\,q^{13+2\,M}\,z^2 + q^{14+2\,M}\,z^2 + 4\,q^{15+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 3\,q^{17+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 3\,q^{17+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 3\,q^{17+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 3\,q^{17+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 3\,q^{17+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 3\,q^{17+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2 + 2\,q^{16+2\,M}\,z^2
                                                                                                                                                                                                                                                                                                                                                         2 q^{18+2} m z^2 + 2 q^{19+2} m z^2 + 2 q^{20+2} m z^2 + q^{21+2} m z^2 + q^{22+2} m z^2 + q^{24+2} m z^2 + q^{23+6} m z^2 + 2 q^{25+6} m z^2 + q^{24+2} m z^
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q^{27+6} M z^2 + 2 q^{28+6} M z^2 - 3 q^{29+6} M z^2 + 3 q^{30+6} M z^2 - 5 q^{31+6} M z^2 + q^{32+6} M z^2 - 4 q^{33+6} M z^2 - 2 q^{34+6} M z^2 - 3
                                                                                                                 a^{35+6} M z^2 - 3 a^{36+6} M z^2 - a^{38+6} M z^2 - 3 a^{43+10} M z^2 + 3 a^{44+10} M z^2 - 7 a^{45+10} M z^2 + 5 a^{46+10} M z^2 - 7
                                                                                                                 6 q^{47+10 \,\text{M}} z^2 + 3 q^{48+10 \,\text{M}} z^2 - 2 q^{49+10 \,\text{M}} z^2 + q^{50+10 \,\text{M}} z^2 - z^3 - q^2 z^3 - 2 q^4 z^3 - 3 q^6 z^3 - 3 q^8 z^3 - q^2 z^3 - 3 q^6 z^3 - 3 q^
                                                                                                                 3\ q^{10}\ z^3 - 3\ q^{12}\ z^3 - 2\ q^{14}\ z^3 - q^{16}\ z^3 - q^{18}\ z^3 - q^{14+4}\ z^3 - 3\ q^{16+4}\ z^3 - 6\ q^{18+4}\ z^3 - 6\ q^{20+4}\ z^3 - q^{2
                                                                                                                 q^{21+4} m^2 z^3 - 6 q^{22+4} m^2 z^3 - q^{23+4} m^2 z^3 - 2 q^{24+4} m^2 z^3 - 2 q^{25+4} m^2 z^3 + q^{26+4} m^2 z^3 - q^{27+4} m^2 z^3 + 2 q^{28+4} m^2 z^3 - 2 q^{2
                                                                                                               q^{29+4}\,^{\rm M}\,z^3+2\,q^{30+4}\,^{\rm M}\,z^3+q^{32+4}\,^{\rm M}\,z^3-q^{32+8}\,^{\rm M}\,z^3+q^{33+8}\,^{\rm M}\,z^3+q^{35+8}\,^{\rm M}\,z^3+5\,q^{36+8}\,^{\rm M}\,z^3-q^{37+8}\,^{\rm M}\,z^3+q^{32+8}\,^{\rm M}\,z^3+q^{33+8}\,^{\rm M}\,z^3+
                                                                                                               9\ q^{38+8\ M}\ z^3-q^{39+8\ M}\ z^3+6\ q^{40+8\ M}\ z^3+3\ q^{41+8\ M}\ z^3+3\ q^{43+8\ M}\ z^3-q^{44+8\ M}\ z^3-q^{51+12\ M}\ z^3+4\ q^{52+12\ M}\ z^3-q^{44+8\ M}\ z^3-q^{4
                                                                                                                 5 q^{53+12 M} z^3 + 5 q^{54+12 M} z^3 - 4 q^{55+12 M} z^3 + q^{56+12 M} z^3 + q^{7+2 M} z^4 + 2 q^{9+2 M} z^4 + 4 q^{11+2 M} z^4 + 5 q^{13+2 M} z^4 +
                                                                                                               6\,q^{15+2\,M}\,z^4+5\,q^{17+2\,M}\,z^4+4\,q^{19+2\,M}\,z^4+2\,q^{21+2\,M}\,z^4+q^{23+2\,M}\,z^4+q^{23+6\,M}\,z^4+3\,q^{25+6\,M}\,z^4-q^{26+6\,M}\,z^4+2\,q^{21+2\,M}\,z^4+q^{23+2\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6\,M}\,z^4+q^{23+6
                                                                                                                 3\ q^{27+6\ M}\ z^4-q^{28+6\ M}\ z^4+q^{29+6\ M}\ z^4-2\ q^{30+6\ M}\ z^4-2\ q^{31+6\ M}\ z^4-2\ q^{32+6\ M}\ z^4-3\ q^{33+6\ M}\ z^4-2\ q^{34+6\ M}\ z^4-2\ q^{34+6
                                                                                                                 2\ q^{35+6\ M}\ z^4-q^{36+6\ M}\ z^4-q^{37+6\ M}\ z^4-q^{42+10\ M}\ z^4-q^{43+10\ M}\ z^4-4\ q^{45+10\ M}\ z^4+2\ q^{46+10\ M}\ z^4-3\ q^{47+10\ M}\ z^4+2\ q^{46+10\ M}\ z^4-2\ q^{46+10\ M}\ z^4-2
                                                                                                                 q^{48+10\,\text{M}}\,z^4-q^{16+4\,\text{M}}\,z^5-2\,q^{18+4\,\text{M}}\,z^5-3\,q^{20+4\,\text{M}}\,z^5-3\,q^{22+4\,\text{M}}\,z^5-2\,q^{24+4\,\text{M}}\,z^5-q^{26+4\,\text{M}}\,z^5-q^{34+8\,\text{M}}\,z^5+q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q
                                                                                                                 q^{35+8\,\text{M}}\,z^5+q^{36+8\,\text{M}}\,z^5+q^{37+8\,\text{M}}\,z^5+q^{38+8\,\text{M}}\,z^5+2\,q^{39+8\,\text{M}}\,z^5+q^{41+8\,\text{M}}\,z^5+q^{27+6\,\text{M}}\,z^6\big)\,\,\text{SUM}\,[\,3+\text{M}\,]\,-1
                                                      q^{36+24\,M}\,\left(q^{20+4\,M}+q^{23+4\,M}+q^{25+4\,M}-q^{40+8\,M}-q^{42+8\,M}-q^{44+8\,M}-q^{9+2\,M}\,z-2\,q^{11+2\,M}\,z-2\,q^{13+2\,M}\,z-1\right)
                                                                                                                 q^{14+2\,M}\,z-2\,q^{15+2\,M}\,z-q^{16+2\,M}\,z-2\,q^{17+2\,M}\,z-q^{18+2\,M}\,z-q^{19+2\,M}\,z-q^{20+2\,M}\,z-q^{22+2\,M}\,z+q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z-q^{20+2\,M}\,z
                                                                                                                 q^{30+6\,M} z + 2 q^{31+6\,M} z + 4 q^{33+6\,M} z + q^{34+6\,M} z + 2 q^{35+6\,M} z + 4 q^{36+6\,M} z + 3 q^{38+6\,M} z + q^{40+6\,M} z +
                                                                                                                 q^{49+10\,\text{M}}\;z\;-\;2\;q^{50+10\,\text{M}}\;z\;+\;3\;q^{51+10\,\text{M}}\;z\;-\;4\;q^{52+10\,\text{M}}\;z\;+\;2\;q^{53+10\,\text{M}}\;z\;-\;2\;q^{54+10\,\text{M}}\;z\;-\;q^{56+10\,\text{M}}\;z\;+\;z^2\;+\;2\;q^{53+10\,\text{M}}\;z\;-\;2\;q^{54+10\,\text{M}}\;z\;-\;q^{56+10\,\text{M}}\;z\;+\;z^2\;+\;2\;q^{53+10\,\text{M}}\;z\;-\;2\;q^{54+10\,\text{M}}\;z\;-\;q^{56+10\,\text{M}}\;z\;+\;z^2\;+\;2\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{56+10\,\text{M}}\;z\;+\;z^2\;+\;2\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{54+10\,\text{M}}\;z\;-\;q^{
                                                                                                               q^2\;z^2\;+\;2\;q^4\;z^2\;+\;2\;q^6\;z^2\;+\;3\;q^8\;z^2\;+\;2\;q^{10}\;z^2\;+\;2\;q^{12}\;z^2\;+\;q^{14}\;z^2\;+\;q^{16}\;z^2\;+\;q^{18+4\;M}\;z^2\;+\;2\;q^{20+4\;M}\;z^2\;-\;q^{18+4\;M}\;z^2\;+\;2\;q^{20+4\;M}\;z^2\;-\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;M}\;z^2\;+\;2\;q^{18+4\;
                                                                                                                 q^{21+4} M z^2+2 q^{22+4} M z^2-q^{24+4} M z^2-2 q^{26+4} M z^2-4 q^{28+4} M z^2-3 q^{30+4} M z^2-2 q^{32+4} M z^2-2
                                                                                                               q^{34+4\,\text{M}}\;z^2-q^{38+8\,\text{M}}\;z^2-q^{39+8\,\text{M}}\;z^2-3\;q^{40+8\,\text{M}}\;z^2-4\;q^{42+8\,\text{M}}\;z^2-q^{43+8\,\text{M}}\;z^2+q^{44+8\,\text{M}}\;z^2-4\;q^{45+8\,\text{M}}\;z^2+q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{44+8\,\text{M}}\;z^2-q^{4
                                                                                                               4\,q^{46+8\,M}\,z^2-2\,q^{47+8\,M}\,z^2+q^{48+8\,M}\,z^2+q^{50+8\,M}\,z^2+2\,q^{59+12\,M}\,z^2-3\,q^{60+12\,M}\,z^2+5\,q^{61+12\,M}\,z^2-1
                                                                                                                 3\ q^{62+12\,\text{M}}\ z^2+2\ q^{63+12\,\text{M}}\ z^2-q^{9+2\,\text{M}}\ z^3-2\ q^{11+2\,\text{M}}\ z^3-3\ q^{13+2\,\text{M}}\ z^3-3\ q^{15+2\,\text{M}}\ z^3-3\ q^{17+2\,\text{M}}\ z^3-2
                                                                                                                 2 q^{19+2} M z^3 - q^{21+2} M z^3 + q^{30+6} M z^3 + q^{31+6} M z^3 + 2 q^{32+6} M z^3 + 3 q^{33+6} M z^3 + 2 q^{34+6} M z^3 + 3 q^{35+6} M z^3 + q^{35+6} M 
                                                                                                                 2\ q^{36+6\ M}\ z^3+2\ q^{37+6\ M}\ z^3+q^{38+6\ M}\ z^3+q^{39+6\ M}\ z^3+q^{49+10\ M}\ z^3-q^{50+10\ M}\ z^3+q^{51+10\ M}\ z^3-2\ q^{52+10\ M}\ z^3-q^{50+10\ M}\ z^3+q^{51+10\ M}\ z^3-q^{50+10\ M}\ z^3-q^{50
                                                                                                                 q^{54+10\,\text{M}}\;z^3-q^{55+10\,\text{M}}\;z^3+q^{20+4\,\text{M}}\;z^4+q^{22+4\,\text{M}}\;z^4+q^{24+4\,\text{M}}\;z^4-q^{40+8\,\text{M}}\;z^4-q^{41+8\,\text{M}}\;z^4-q^{43+8\,\text{M}}\;z^4\right)
                                                                          SUM [4 + M] - q^{64+30 M} (-1 + q^{5+M}) (1 + q^{5+M}) (1 + q^{10+2 M})
                                                                                \left(-q^{11+2\,M}-q^{13+2\,M}-q^{16+2\,M}+q^{34+6\,M}+q^{36+6\,M}+q^{38+6\,M}+z+q^2\,z+q^4\,z+q^6\,z+q^8\,z+q^{10}\,z+q^{22+4\,M}\,z-q^{12}\right)
                                                                                                                 q^{23+4\,M}\,z\,-\,q^{24+4\,M}\,z\,-\,2\,q^{26+4\,M}\,z\,-\,q^{28+4\,M}\,z\,-\,q^{30+4\,M}\,z\,-\,q^{32+4\,M}\,z\,-\,q^{45+8\,M}\,z\,+\,2\,q^{46+8\,M}\,z\,-\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+\,2\,q^{47+8\,M}\,z\,+
                                                                                                                 q^{48+8\,M}\,z-q^{11+2\,M}\,z^2-q^{13+2\,M}\,z^2-q^{15+2\,M}\,z^2+q^{34+6\,M}\,z^2+q^{36+6\,M}\,z^2+q^{37+6\,M}\,z^2\big)\,\,\,SUM\,[\,5+M\,]\,+\,\,2\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1+2)\,\,(1
                                                      q^{100+36\,M}\,\left(-1+q^{5+M}\right)\,\,\left(1+q^{5+M}\right)\,\,\left(-1+q^{6+M}\right)\,\,\left(1+q^{6+M}\right)\,\,\left(1+q^{10+2\,M}\right)\,\,\left(1+q^{12+2\,M}\right)
                                                                                (-1 + q^{13+2M}) (1 + q^{13+2M}) SUM[6 + M] = 0
(*Verifying the recurrence for odd M*)
```

```
In[133]:= ClearAll[M, A, Z];
                                                                                                               MyQP [A_, q_, n_] := \prod_{k=0}^{n-1} (1 - A q^k);
                                                                                                               A[k_{-}, M_{-}] := \frac{z^{k} q^{-3 (M+k) (M+k+1)} MyQP[z q^{2M+1}, q^{2}, k] MyQP[z^{-1} q^{2M+1}, q^{2}, k]}{z^{2M+1}};
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q^{-3 M (M+1)} MyQP[q^{2 M+2}, -q, 2 R]
                                                                                                                      \left( -\,q^{4}\,\left( q^{1+2\,M}\,-\,z\right) \,\left( q^{3+2\,M}\,-\,z\right) \,\left( q^{6+2\,M}\,-\,z\right) \,z^{3}\,\left( -\,1\,+\,q^{1+2\,M}\,z\right) \,\left( -\,1\,+\,q^{3+2\,M}\,z\right) \,\left( -\,1\,+\,q^{5+2\,M}\,z\right) \,A\left[ 0\,,\,M\right] \,-\,2\,\left( q^{2+2\,M}\,-\,z\right) \,\left( q^{2+2\,M}\,-\,z\right
                                                                                                                                                                                         q^{6\,M} \left(q^{3+2\,M}-z\right) z^2 \left(-1+q^{3+2\,M}z\right) \left(-1+q^{5+2\,M}z\right) \left(q^{13+4\,M}+q^{15+4\,M}+q^{17+4\,M}-q^{5+2\,M}z-q^{7+2\,M}z-q^{8+2\,M}z-q^{8+2\,M}z-q^{17+2\,M}z\right)
                                                                                                                                                                                                                                                              q^{9+2\,M}\,z\,-\,q^{10+2\,M}\,z\,-\,q^{11+2\,M}\,z\,-\,q^{12+2\,M}\,z\,-\,q^{14+2\,M}\,z\,-\,q^{16+2\,M}\,z\,-\,q^{20+6\,M}\,z\,+\,2\,q^{21+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{21+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{21+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{21+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,+\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,q^{22+6\,M}\,z\,-\,2\,
                                                                                                                                                                                                                                                              q^{23+6\,M}\,z\,+\,z^2\,+\,q^2\,z^2\,+\,q^4\,z^2\,+\,q^6\,z^2\,+\,q^8\,z^2\,+\,q^{10}\,z^2\,+\,q^{12+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{17+4\,M}\,z^2\,-\,q^{7+2\,M}\,z^3\,-\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+\,q^{14+4\,M}\,z^2\,+
                                                                                                                                                                                                                                                              q^{9+2} z^3 - q^{11+2} z^3 A[1, M] + q^{4+12} z^3 Z (-1 + q^{5+2} z^3) (-q^{22+6} z^3 - q^{24+6} z^3 - q^{26+6} z^3 + q^{12+4} z^3 z +
                                                                                                                                                                                                                                                              q^{14+4\,M}\,z\,+\,q^{15+4\,M}\,z\,+\,2\,q^{16+4\,M}\,z\,+\,2\,q^{17+4\,M}\,z\,+\,q^{18+4\,M}\,z\,+\,3\,q^{19+4\,M}\,z\,+\,q^{20+4\,M}\,z\,+\,3\,q^{21+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}\,z\,+\,2\,q^{23+4\,M}
                                                                                                                                                                                                                                                              q^{25+4} \, ^{M} \, z + q^{29+8} \, ^{M} \, z - 2 \, q^{30+8} \, ^{M} \, z + 3 \, q^{31+8} \, ^{M} \, z - 4 \, q^{32+8} \, ^{M} \, z + 2 \, q^{33+8} \, ^{M} \, z - 2 \, q^{34+8} \, ^{M} \, z - q^{36+8} \, ^{M} \, z - q^{5+2} \, ^{M} \, z^{2} - 2 \, ^{33+8} \, ^{M} \, z 
                                                                                                                                                                                                                                                              2q^{7+2}Mz^2 - 3q^{9+2}Mz^2 - q^{10+2}Mz^2 - 4q^{11+2}Mz^2 - q^{12+2}Mz^2 - 4q^{13+2}Mz^2 - 2q^{14+2}Mz^2 - 3q^{15+2}Mz^2 - q^{12+2}Mz^2 - 
                                                                                                                                                                                                                                                                 2q^{16+2}Mz^2 - 2q^{17+2}Mz^2 - 2q^{18+2}Mz^2 - q^{19+2}Mz^2 - q^{20+2}Mz^2 - q^{22+2}Mz^2 - q^{19+6}Mz^2 - 2q^{21+6}Mz^2 - q^{21+6}Mz^2 - 
                                                                                                                                                                                                                                                                 2q^{23+6}mz^2 - 2q^{24+6}mz^2 + 2q^{25+6}mz^2 - 4q^{26+6}mz^2 + 4q^{27+6}mz^2 - 3q^{28+6}mz^2 + 3q^{29+6}mz^2 + q^{31+6}mz^2 + q^{31+6}mz^2
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a^{32+6} M z^2 + 2 a^{37+10} M z^2 - 3 a^{38+10} M z^2 + 5 a^{39+10} M z^2 - 3 a^{40+10} M z^2 + 2 a^{41+10} M z^2 + z^3 + a^2 z^3 + a^3
                                                   2q^4z^3 + 2q^6z^3 + 3q^8z^3 + 2q^{10}z^3 + 2q^{12}z^3 + q^{14}z^3 + q^{16}z^3 + q^{12+4}z^3 + 3q^{14+4}z^3 + 5q^{16+4}z^3 +
                                                   5q^{18+4}mz^3+q^{19+4}mz^3+3q^{20+4}mz^3+q^{21+4}mz^3+2q^{22+4}mz^3+q^{23+4}mz^3-q^{24+4}mz^3+q^{25+4}mz^3-q^{24+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+q^{25+4}mz^3+
                                                 q^{26+4} \, z^3 + q^{28+8} \, z^3 - q^{29+8} \, z^3 - 3 \, q^{32+8} \, z^3 + 2 \, q^{33+8} \, z^3 - 4 \, q^{34+8} \, z^3 + q^{35+8} \, z^3 - 2 \, q^{36+8} \, z^3 - 2 
                                                 q^{7+2}Mz^4 - 2q^{9+2}Mz^4 - 3q^{11+2}Mz^4 - 3q^{13+2}Mz^4 - 3q^{15+2}Mz^4 - 2q^{17+2}Mz^4 - q^{19+2}Mz^4 - q^{21+6}Mz^4 - q
                                                   2q^{23+6}mz^4+q^{24+6}mz^4-q^{25+6}mz^4+q^{27+6}mz^4+q^{28+6}mz^4+q^{30+6}mz^4+q^{16+4}mz^5+q^{18+4}mz^5+q^{20+4}mz^5)
                 A[2, M] - q^{16+18M} (q^{28+6M} - q^{16+4M} z - q^{18+4M} z - q^{19+4M} z - q^{20+4M} z - 2 q^{21+4M} z - q^{22+4M} z -
                                                   2q^{23+4} z - 2q^{25+4} z - q^{27+4} z - q^{35+8} z + 3q^{36+8} z - 2q^{37+8} z + 3q^{38+8} z + 2q^{40+8} z + 2q^{40+8}
                                                   q^{42+8} z + q^{7+2} z^2 + 2 q^{9+2} z^2 + 3 q^{11+2} z^2 + q^{12+2} z^2 + 4 q^{13+2} z^2 + q^{14+2} z^2 + 4 q^{15+2} z^2 + 4 z^2 + 4
                                                 2 q^{16+2} + 3 q^{17+2} + 2 q^{18+2} + 2 q^{18+2} + 2 q^{19+2} + 2 q^{19+2} + 2 q^{20+2} + 2^2 + q^{21+2} + 2^2 + q^{22+2} + 2^2 + q^{24+2} + 2^2 + q^{24+2} + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2
                                                 a^{23+6} M z^2 + 2 a^{25+6} M z^2 + a^{27+6} M z^2 + 2 a^{28+6} M z^2 - 3 a^{29+6} M z^2 + 3 a^{30+6} M z^2 - 5 a^{31+6} M z^2 + a^{32+6} M z^2 - 5
                                                 4q^{33+6}mz^2 - 2q^{34+6}mz^2 - q^{35+6}mz^2 - 3q^{36+6}mz^2 - q^{38+6}mz^2 - 3q^{43+10}mz^2 + 3q^{44+10}mz^2 - 7q^{45+10}mz^2 +
                                                 5q^{46+10}mz^2 - 6q^{47+10}mz^2 + 3q^{48+10}mz^2 - 2q^{49+10}mz^2 + q^{50+10}mz^2 - z^3 - q^2z^3 - 2q^4z^3 - 3q^6z^3 - q^2z^3 -
                                                   3q^8z^3 - 3q^{10}z^3 - 3q^{12}z^3 - 2q^{14}z^3 - q^{16}z^3 - q^{18}z^3 - q^{14+4}z^3 - 3q^{16+4}z^3 - 6q^{18+4}z^3 - 6q^{18+
                                                 6 q^{20+4} z^3 - q^{21+4} z^3 - 6 q^{22+4} z^3 - q^{23+4} z^3 - 2 q^{24+4} z^3 - 2 q^{25+4} z^3 + q^{26+4} z^3 - q^{27+4} z^
                                                 2q^{28+4}mz^3 - q^{29+4}mz^3 + 2q^{30+4}mz^3 + q^{32+4}mz^3 - q^{32+8}mz^3 + q^{33+8}mz^3 + q^{35+8}mz^3 + 5q^{36+8}mz^3 - q^{36+8}mz^3 + q
                                                 q^{37+8\,\text{M}}\,z^3+9\,q^{38+8\,\text{M}}\,z^3-q^{39+8\,\text{M}}\,z^3+6\,q^{40+8\,\text{M}}\,z^3+3\,q^{41+8\,\text{M}}\,z^3+3\,q^{43+8\,\text{M}}\,z^3-q^{44+8\,\text{M}}\,z^3-q^{51+12\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q^{40+8\,\text{M}}\,z^3+q
                                                 4\,q^{52+12\,M}\,z^3-5\,q^{53+12\,M}\,z^3+5\,q^{54+12\,M}\,z^3-4\,q^{55+12\,M}\,z^3+q^{56+12\,M}\,z^3+q^{7+2\,M}\,z^4+2\,q^{9+2\,M}\,z^4+4\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{11+2\,M}\,z^4+2\,q^{
                                                   5q^{13+2} z^4 + 6q^{15+2} z^4 + 5q^{17+2} z^4 + 4q^{19+2} z^4 + 2q^{21+2} z^4 + q^{23+2} z^4 + q^{23+6} z^4 + 3q^{25+6} z^4 - q^{25+6}
                                                 q^{26+6}M z^4 + 3 q^{27+6}M z^4 - q^{28+6}M z^4 + q^{29+6}M z^4 - 2 q^{30+6}M z^4 - 2 q^{31+6}M z^4 - 2 q^{32+6}M z^4 - 3 q^{33+6}M z^4 - 3
                                                 2q^{34+6}mz^4 - 2q^{35+6}mz^4 - q^{36+6}mz^4 - q^{37+6}mz^4 - q^{42+10}mz^4 - q^{43+10}mz^4 - 4q^{45+10}mz^4 + 2q^{46+10}mz^4 - q^{46+10}mz^4 - q^{46+10}mz^
                                                   3\ q^{47+10\ M}\ z^4+q^{48+10\ M}\ z^4-q^{16+4\ M}\ z^5-2\ q^{18+4\ M}\ z^5-3\ q^{20+4\ M}\ z^5-3\ q^{22+4\ M}\ z^5-2\ q^{24+4\ M}\ z^5-q^{26+4\ M}\ z^5-q^{2
                                                   q^{34+8} z^5 + q^{35+8} z^5 + q^{36+8} z^5 + q^{37+8} z^5 + q^{38+8} z^5 + 2 q^{39+8} z^5 + q^{41+8} z^5 + q^{27+6} z^6) A[3, M] -
q^{36+24\,\text{M}}\,\left(\,q^{20+4\,\text{M}}+q^{23+4\,\text{M}}+q^{25+4\,\text{M}}-q^{40+8\,\text{M}}-q^{42+8\,\text{M}}-q^{44+8\,\text{M}}-q^{9+2\,\text{M}}\,z-2\;q^{11+2\,\text{M}}\,z-2\;q^{13+2\,\text{M}}\,z-1\right)
                                                 q^{14+2} z - 2 q^{15+2} z - q^{16+2} z - 2 q^{17+2} z - q^{18+2} z - q^{19+2} z - q^{20+2} z - q^{22+2} z + q^{30+6} z + q^{30+6}
                                                   2 q^{31+6} + q^{33+6} + q^{34+6} + q^{34+6} + q^{34+6} + q^{35+6} + q^{49+6} + q^{49+10} + q^{49+10}
                                                   2q^{50+10} M z + 3q^{51+10} M z - 4q^{52+10} M z + 2q^{53+10} M z - 2q^{54+10} M z - q^{56+10} M z + z^2+q^2 z<sup>2</sup> + 2q^4 z<sup>2</sup> +
                                                 2 q^6 z^2 + 3 q^8 z^2 + 2 q^{10} z^2 + 2 q^{12} z^2 + q^{14} z^2 + q^{16} z^2 + q^{18+4} z^2 + 2 q^{20+4} z^2 - q^{21+4} z^2 + 2 q^{22+4} z^2 - q^{21+4} z^2 + 2 q^{20+4} z^2 - q^{21+4} z^2 + 2 q^{20+4} z^2 - q^{21+4} z^2 + 2 q^{20+4} z^2 - q^{2
                                                 q^{24+4\,\text{M}}\,\,z^2-2\,q^{26+4\,\text{M}}\,\,z^2-4\,q^{28+4\,\text{M}}\,\,z^2-3\,q^{30+4\,\text{M}}\,\,z^2-2\,q^{32+4\,\text{M}}\,\,z^2-q^{34+4\,\text{M}}\,\,z^2-q^{38+8\,\text{M}}\,\,z^2-q^{39+8\,\text{M}}\,\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}}\,z^2-q^{39+8\,\text{M}
                                                 3q^{40+8}mz^2 - 4q^{42+8}mz^2 - q^{43+8}mz^2 + q^{44+8}mz^2 - 4q^{45+8}mz^2 + 4q^{46+8}mz^2 - 2q^{47+8}mz^2 + q^{48+8}mz^2 +
                                                 a^{50+8} a^{2} + 2 a^{59+12} a^{2} - 3 a^{60+12} a^{2} + 5 a^{61+12} a^{2} - 3 a^{62+12} a^{2} + 2 a^{63+12} a^{2} - a^{9+2} a^{2}
                                                 2q^{11+2}Mz^3 - 3q^{13+2}Mz^3 - 3q^{15+2}Mz^3 - 3q^{15+2}Mz^3 - 2q^{19+2}Mz^3 - q^{21+2}Mz^3 + q^{30+6}Mz^3 + q^{31+6}Mz^3 +
                                                 2q^{32+6}mz^3 + 3q^{33+6}mz^3 + 2q^{34+6}mz^3 + 3q^{35+6}mz^3 + 2q^{36+6}mz^3 + 2q^{37+6}mz^3 + q^{38+6}mz^3 + q^{39+6}mz^3 
                                                 q^{49+10\,M}\,z^3-q^{50+10\,M}\,z^3+q^{51+10\,M}\,z^3-2\,q^{52+10\,M}\,z^3-q^{54+10\,M}\,z^3-q^{55+10\,M}\,z^3+q^{20+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,z^4+q^{22+4\,M}\,
                                                 q^{24+4\,M}\,z^4-q^{40+8\,M}\,z^4-q^{41+8\,M}\,z^4-q^{43+8\,M}\,z^4\right)\,A\,[\,4\,,\,\,M\,]\,-q^{64+30\,M}\,\left(\,-\,1\,+\,q^{5+M}\right)\,\left(\,1\,+\,q^{5+M}\right)\,\left(\,1\,+\,q^{10+2\,M}\right)
                      \left(-q^{11+2\,M}-q^{13+2\,M}-q^{16+2\,M}+q^{34+6\,M}+q^{36+6\,M}+q^{38+6\,M}+z+q^2\,z+q^4\,z+q^6\,z+q^8\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10}\,z+q^{10
                                                   2q^{47+8} z + q^{48+8} z - q^{11+2} z^2 - q^{13+2} z^2 - q^{15+2} z^2 + q^{34+6} z^2 + q^{36+6} z^2 + q^{37+6} z^2 A[5, M] + q^{36+6}
q^{100+36\,M}\,\left(-1+q^{5+M}\right)\,\left(1+q^{5+M}\right)\,\left(-1+q^{6+M}\right)\,\left(1+q^{6+M}\right)\,\left(1+q^{10+2\,M}\right)\,\left(1+q^{12+2\,M}\right)
                    (-1+q^{13+2}) (1+q^{13+2}) A[6, M]) // Simplify
```

Out[135]= **0**

(*Recurrence for T_M, with M even*)

```
In[136]:= ClearAll[M, N1, N2, N3, N4, N5, z];
       summand =
          (-1)^{N1+N2} z^{N1+N3} q^{-N1-M} N_1+N_1^2-N_2-2 M N_2+2 N_1 N_2+2 N_2^2-3 M N_3+2 N_1 N_3+4 N_2 N_3+3 N_3^2} q
               q^2, M - N1 - N2 - 2 N3 / (qPochhammer [q^2, q^2, N1] qPochhammer [q^2, q^2, N2]
                 qPochhammer [q^2, q^2, N3] qPochhammer [q^2, q^2, M-N1-N2-2N3]) /. \{M \rightarrow 2M\};
       stru = qFindStructureSet[summand, \{M\}, \{N1, N2, N3\}, \{2\}, \{2, 2, 2\},
           {1, 1, 1}, qProtocol → True];
       rec = qFindRecurrence[summand, {M}, {N1, N2, N3}, {2}, {2, 2, 2},
           {1, 1, 1}, qProtocol → True, StructSet → stru[[1]]];
       sumrec = qSumRecurrence[rec]
       Structure set (600 elts.):
        \{\{0,0,0,0\},\{1,0,0,0\},\{1,0,0,1\},\{1,0,1,0\},\{1,0,2,0\},\{1,1,0,0\},\{1,1,1,0\},
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Eliminating trivial equations
                                               Starting equation solver
                                               Dimension of matrix: 11346x3116
                                                Simplifying 1 solution(s)
                                               Solution exists
                                                Structure set (143 elts.):
                                                        \{\{0,0,0,0\},\{1,0,0,0\},\{1,0,0,1\},\{1,0,1,0\},\{1,0,2,0\},\{1,1,0,0\},\{1,1,1,0\},
                                                               \{1, 2, 0, 0\}, \{2, 0, 0, 0\}, \{2, 0, 0, 1\}, \{2, 0, 0, 2\}, \{2, 0, 1, 0\}, \{2, 0, 1, 1\}, \{2, 0, 2, 0\},
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                                                                 \{6, 3, 0, 2\}, \{6, 3, 0, 3\}, \{6, 3, 1, 1\}, \{6, 3, 1, 2\}, \{6, 3, 2, 0\}, \{6, 3, 2, 1\}\}
                                                Setting up equations
                                                Eliminating trivial equations
                                               Starting equation solver
                                               Dimension of matrix: 3104x1095
                                               Simplifying 1 solution(s)
 \text{Out} [140] = \left\{ q^7 \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \ z^3 \left( -q^{2\,M} + z \right) \left( -1 + q^{2\,M} \, z \right) \left( -1 + q^{2+2\,M} \, z \right) \left( -1 + q^{4+2\,M} \, z \right) \right\} \\ \text{SUM} \left[ M \right] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \ z^3 \left( -q^{2\,M} + z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{5+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right) \right\} \\ \text{Out} \left[ 140] = \left\{ q^{7} \left( q^{2+2\,M} - z \right)
                                                                         q^{6\,M} (q^{2+2\,M}-z) z^2 (-1+q^{2+2\,M}z) (-1+q^{4+2\,M}z)
                                                                                     (q^{11+4}M + q^{13+4}M + q^{15+4}M - q^{4+2}M z - q^{6+2}M z - q^{7+2}M z - q^{8+2}M z - q^{9+2}M z - q^{10+2}M z - q^{11+2}M 
                                                                                                    q^{13+2\,M}\,z\,-\,q^{15+2\,M}\,z\,-\,q^{17+6\,M}\,z\,+\,2\,q^{18+6\,M}\,z\,-\,2\,q^{19+6\,M}\,z\,+\,q^{20+6\,M}\,z\,+\,z^2\,+\,q^2\,z^2\,+\,q^4\,z^2\,+\,q^6\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,q^2\,z^2\,+\,
                                                                                                    q^{1+12\,M}\,z\,\left(-1+q^{4+2\,M}\,z\right)\,\left(-q^{19+6\,M}-q^{21+6\,M}-q^{23+6\,M}+q^{10+4\,M}\,z+q^{12+4\,M}\,z+q^{13+4\,M}\,z+2\,q^{14+4\,M}\,z+2\,q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M}\,z+q^{14+4\,M
                                                                                                    2\,q^{15+4\,M}\,z\,+\,q^{16+4\,M}\,z\,+\,3\,q^{17+4\,M}\,z\,+\,q^{18+4\,M}\,z\,+\,3\,q^{19+4\,M}\,z\,+\,2\,q^{21+4\,M}\,z\,+\,q^{23+4\,M}\,z\,+\,q^{25+8\,M}\,z\,-\,2\,q^{26+8\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M}\,z\,+\,q^{22+2\,M
                                                                                                     3 q^{27+8 M} z - 4 q^{28+8 M} z + 2 q^{29+8 M} z - 2 q^{30+8 M} z - q^{32+8 M} z - q^{4+2 M} z^2 - 2 q^{6+2 M} z^2 - 3 q^{8+2 M} z^2 -
                                                                                                    q^{9+2\,\text{M}}\,\,z^2\,-\,4\,\,q^{10+2\,\text{M}}\,\,z^2\,-\,q^{11+2\,\text{M}}\,\,z^2\,-\,4\,\,q^{12+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{13+2\,\text{M}}\,\,z^2\,-\,3\,\,q^{14+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{15+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,\text{M}}\,\,z^2\,-\,2\,\,q^{16+2\,
                                                                                                    2\,{q}^{17+2\,\text{M}}\,{z}^{2}-{q}^{18+2\,\text{M}}\,{z}^{2}-{q}^{19+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{16+6\,\text{M}}\,{z}^{2}-2\,{q}^{18+6\,\text{M}}\,{z}^{2}-2\,{q}^{20+6\,\text{M}}\,{z}^{2}-2\,{q}^{21+6\,\text{M}}\,{z}^{2}+{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^{2}-{q}^{21+2\,\text{M}}\,{z}^
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 $2q^{22+6} + q^{23+6} + q^{23+6} + q^{24+6} + q^{24+6} + q^{24+6} + q^{25+6} + q^{25+6}$ $3 a^{33+10 \text{ M}} z^2 + 5 a^{34+10 \text{ M}} z^2 - 3 a^{35+10 \text{ M}} z^2 + 2 a^{36+10 \text{ M}} z^2 + z^3 + a^2 z^3 + 2 a^4 z^3 + 2 a^6 z^3 + 3 a^8 z^3 + a^2 z^$ $2 q^{10} z^3 + 2 q^{12} z^3 + q^{14} z^3 + q^{16} z^3 + q^{10+4} z^3 + 3 q^{12+4} z^3 + 5 q^{14+4} z^3 + 5 q^{16+4} z^3 + q^{17+4} z^3 + q^$ $3 \, q^{18+4} \, m \, z^3 + q^{19+4} \, m \, z^3 + 2 \, q^{20+4} \, m \, z^3 + q^{21+4} \, m \, z^3 - q^{22+4} \, m \, z^3 + q^{23+4} \, m \, z^3 - q^{24+4} \, m \, z^3 + q^{24+8} \, m \, z^3 - q^{24+8} \, m \, z^3 + q^{24+8} \, m \, z^3 +$

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q^{25+8} M z^3-3 q^{28+8} M z^3+2 q^{29+8} M z^3-4 q^{30+8} M z^3+q^{31+8} M z^3-2 q^{32+8} M z^3-q^{6+2} M z^4-2 q^{8+2} M z^4-2
                                                                              3\ q^{10+2\ M}\ z^4-3\ q^{12+2\ M}\ z^4-3\ q^{14+2\ M}\ z^4-2\ q^{16+2\ M}\ z^4-q^{18+2\ M}\ z^4-q^{18+6\ M}\ z^4-2\ q^{20+6\ M}\ z^4+q^{21+6\ M}\ z^4-q^{18+2\ M}\ z^4-q^{18+6\ M}\ z^4-q^{18+
                                                                              q^{22+6\,M}\,z^4+q^{24+6\,M}\,z^4+q^{25+6\,M}\,z^4+q^{27+6\,M}\,z^4+q^{14+4\,M}\,z^5+q^{16+4\,M}\,z^5+q^{18+4\,M}\,z^5\right)\,SUM\,[\,2+M\,]\,-
q^{10+18\,\text{M}} ( q^{25+6\,\text{M}} - q^{14+4\,\text{M}} z - q^{16+4\,\text{M}} z - q^{17+4\,\text{M}} z - q^{18+4\,\text{M}} z - 2 q^{19+4\,\text{M}} z - q^{20+4\,\text{M}} z - 2 q^{21+4\,\text{M}} z - q^{20+4\,\text{M}} z - q
                                                                              2 \, q^{23+4} \, \text{M} \, z - q^{25+4} \, \text{M} \, z - q^{31+8} \, \text{M} \, z + 3 \, q^{32+8} \, \text{M} \, z - 2 \, q^{33+8} \, \text{M} \, z + 3 \, q^{34+8} \, \text{M} \, z + 2 \, q^{36+8} \, \text{M} \, z + q^{38+8} \, \text{M} \, z + q^{6+2} \, \text{M} \, z^2 + q^{38+8} \, z + q^{38+8} \,
                                                                              2\ q^{8+2\ M}\ z^2+3\ q^{10+2\ M}\ z^2+q^{11+2\ M}\ z^2+4\ q^{12+2\ M}\ z^2+q^{13+2\ M}\ z^2+4\ q^{14+2\ M}\ z^2+2\ q^{15+2\ M}\ z^2+3\ q^{16+2\ M}\ z^2+3\ q^{16+2\ M}\ z^2+2\ q^{16+2\
                                                                              2a^{17+2} m z^2 + 2a^{18+2} m z^2 + 2a^{19+2} m z^2 + a^{20+2} m z^2 + a^{21+2} m z^2 + a^{23+2} m z^2 + a^{20+6} m z^2 + 2a^{22+6} m z^2 + a^{20+6} m z^2 + a^{
                                                                              q^{24+6} M z^2+2 q^{25+6} M z^2-3 q^{26+6} M z^2+3 q^{27+6} M z^2-5 q^{28+6} M z^2+q^{29+6} M z^2-4 q^{30+6} M z^2-2 q^{31+6} M z^2-2
                                                                           q^{32+6\,M}\,z^2-3\,q^{33+6\,M}\,z^2-q^{35+6\,M}\,z^2-3\,q^{38+10\,M}\,z^2+3\,q^{39+10\,M}\,z^2-7\,q^{40+10\,M}\,z^2+5\,q^{41+10\,M}\,z^2-q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40+10\,M}\,z^2+q^{40
                                                                           6 a^{42+10 \text{ M}} z^2 + 3 a^{43+10 \text{ M}} z^2 - 2 a^{44+10 \text{ M}} z^2 + a^{45+10 \text{ M}} z^2 - z^3 - a^2 z^3 - 2 a^4 z^3 - 3 a^6 z^3 - 3 a^8 z^3 - a^3 z^3 
                                                                              3 \, q^{10} \, z^3 - 3 \, q^{12} \, z^3 - 2 \, q^{14} \, z^3 - q^{16} \, z^3 - q^{18} \, z^3 - q^{12+4} \, z^3 - 3 \, q^{14+4} \, z^3 - 6 \, q^{16+4} \, m \, z^3 - 6 \, q^{18+4} \, m \, 
                                                                              q^{19+4} M z^3 - 6 q^{20+4} M z^3 - q^{21+4} M z^3 - 2 q^{22+4} M z^3 - 2 q^{23+4} M z^3 + q^{24+4} M z^3 - q^{25+4} M z^3 + 2 q^{26+4} M z^3 - q^{25+4} M z
                                                                           q^{27+4\,M}\,z^3\,+\,2\,q^{28+4\,M}\,z^3\,+\,q^{30+4\,M}\,z^3\,-\,q^{28+8\,M}\,z^3\,+\,q^{29+8\,M}\,z^3\,+\,q^{31+8\,M}\,z^3\,+\,5\,q^{32+8\,M}\,z^3\,-\,q^{33+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^{32+8\,M}\,z^3\,+\,2\,q^
                                                                           9\ q^{34+8\ M}\ z^3-q^{35+8\ M}\ z^3+6\ q^{36+8\ M}\ z^3+3\ q^{37+8\ M}\ z^3+3\ q^{39+8\ M}\ z^3-q^{40+8\ M}\ z^3-q^{45+12\ M}\ z^3+4\ q^{46+12\ M}\ z^3-q^{46+12\ M}\ z^3+q^{46+12\ M}\ z^3-q^{46+12\ M}\ z^3-q
                                                                           5q^{47+12}mz^3 + 5q^{48+12}mz^3 - 4q^{49+12}mz^3 + q^{50+12}mz^3 + q^{6+2}mz^4 + 2q^{8+2}mz^4 + 4q^{10+2}mz^4 + 5q^{12+2}mz^4 + q^{10+2}mz^4 + q^{10+2}mz^
                                                                           6\,q^{14+2\,M}\,z^4+5\,q^{16+2\,M}\,z^4+4\,q^{18+2\,M}\,z^4+2\,q^{20+2\,M}\,z^4+q^{22+2\,M}\,z^4+q^{20+6\,M}\,z^4+3\,q^{22+6\,M}\,z^4-q^{23+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M}\,z^4+q^{20+6\,M
                                                                              3\ q^{24+6\,M}\ z^4-q^{25+6\,M}\ z^4+q^{26+6\,M}\ z^4-2\ q^{27+6\,M}\ z^4-2\ q^{28+6\,M}\ z^4-2\ q^{29+6\,M}\ z^4-3\ q^{30+6\,M}\ z^4-2\ q^{31+6\,M}\ z^
                                                                              2\ q^{32+6\ M}\ z^4-q^{33+6\ M}\ z^4-q^{34+6\ M}\ z^4-q^{37+10\ M}\ z^4-q^{38+10\ M}\ z^4-4\ q^{40+10\ M}\ z^4+2\ q^{41+10\ M}\ z^4-3\ q^{42+10\ M}\ z^4+2
                                                                              q^{43+10\,\text{M}}\,\,z^4-q^{14+4\,\text{M}}\,\,z^5-2\,\,q^{16+4\,\text{M}}\,\,z^5-3\,\,q^{18+4\,\text{M}}\,\,z^5-3\,\,q^{20+4\,\text{M}}\,\,z^5-2\,\,q^{22+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{30+8\,\text{M}}\,\,z^5+q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^5-q^{24+4\,\text{M}}\,\,z^
                                                                              q^{31+8\,\text{M}}\,z^5+q^{32+8\,\text{M}}\,z^5+q^{33+8\,\text{M}}\,z^5+q^{34+8\,\text{M}}\,z^5+2\,q^{35+8\,\text{M}}\,z^5+q^{37+8\,\text{M}}\,z^5+q^{24+6\,\text{M}}\,z^6\big)\,\,\text{SUM}\,[\,3+\text{M}\,]\,-
a^{27+24}M (a^{18+4}M + a^{21+4}M + a^{23+4}M - a^{36+8}M - a^{38+8}M - a^{40+8}M - a^{8+2}M z - 2 a^{10+2}M z - 2 a^{12+2}M z - 
                                                                              q^{13+2\,\text{M}}\,z-2\,q^{14+2\,\text{M}}\,z-q^{15+2\,\text{M}}\,z-2\,q^{16+2\,\text{M}}\,z-q^{17+2\,\text{M}}\,z-q^{18+2\,\text{M}}\,z-q^{19+2\,\text{M}}\,z-q^{21+2\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,\text{M}}\,z+q^{27+6\,
                                                                              2 a^{28+6} + z + 4 a^{30+6} + z + a^{31+6} + z + 2 a^{32+6} + z + 4 a^{33+6} + z + 3 a^{35+6} + z + a^{37+6} + z + a^{44+10} + z - a^{44+10} + a^{44
                                                                              2\ q^{45+10\ M}\ z\ +\ 3\ q^{46+10\ M}\ z\ -\ 4\ q^{47+10\ M}\ z\ +\ 2\ q^{48+10\ M}\ z\ -\ 2\ q^{49+10\ M}\ z\ -\ q^{51+10\ M}\ z\ +\ z^2\ +\ q^2\ z^2\ +\ 2\ q^4\ z^2\ +\ q^2\ z^2\ +\ 
                                                                              2 q^6 z^2 + 3 q^8 z^2 + 2 q^{10} z^2 + 2 q^{12} z^2 + q^{14} z^2 + q^{16} z^2 + q^{16+4} z^2 + 2 q^{18+4} z^2 - q^{19+4} z^2 + q^{16+4} z^2
                                                                              2\ q^{20+4\ M}\ z^2-q^{22+4\ M}\ z^2-2\ q^{24+4\ M}\ z^2-4\ q^{26+4\ M}\ z^2-3\ q^{28+4\ M}\ z^2-2\ q^{30+4\ M}\ z^2-q^{32+4\ M}\ z^2-q^{32+
                                                                              q^{34+8} M z^2-q^{35+8} M z^2-3 q^{36+8} M z^2-4 q^{38+8} M z^2-q^{39+8} M z^2+q^{40+8} M z^2-4 q^{41+8} M z^2+4 q^{42+8} M z^2-q^{42+8} M z^2-q^{42
                                                                           2\,q^{43+8\,\text{M}}\,z^2+q^{44+8\,\text{M}}\,z^2+q^{46+8\,\text{M}}\,z^2+2\,q^{53+12\,\text{M}}\,z^2-3\,q^{54+12\,\text{M}}\,z^2+5\,q^{55+12\,\text{M}}\,z^2-3\,q^{56+12\,\text{M}}\,z^2+
                                                                              2\ q^{57+12\,\text{M}}\ z^2-q^{8+2\,\text{M}}\ z^3-2\ q^{10+2\,\text{M}}\ z^3-3\ q^{12+2\,\text{M}}\ z^3-3\ q^{14+2\,\text{M}}\ z^3-3\ q^{16+2\,\text{M}}\ z^3-2\ q^{18+2\,\text{M}}\ z^3-2
                                                                              q^{20+2\,M}\,z^3+q^{27+6\,M}\,z^3+q^{28+6\,M}\,z^3+2\,q^{29+6\,M}\,z^3+3\,q^{30+6\,M}\,z^3+2\,q^{31+6\,M}\,z^3+3\,q^{32+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,M}\,z^3+2\,q^{33+6\,
                                                                              2\ q^{34+6\,\text{M}}\ z^3+q^{35+6\,\text{M}}\ z^3+q^{36+6\,\text{M}}\ z^3+q^{44+10\,\text{M}}\ z^3-q^{45+10\,\text{M}}\ z^3+q^{46+10\,\text{M}}\ z^3-2\ q^{47+10\,\text{M}}\ z^3-q^{49+10\,\text{M}}\ z^3-q
                                                                              q^{50+10\,\text{M}}\;z^3+q^{18+4\,\text{M}}\;z^4+q^{20+4\,\text{M}}\;z^4+q^{22+4\,\text{M}}\;z^4-q^{36+8\,\text{M}}\;z^4-q^{37+8\,\text{M}}\;z^4-q^{39+8\,\text{M}}\;z^4\right)\;\text{SUM}\left[\,4+\text{M}\,\right]\;-1
q^{52+30\,M}\,\left(-1+q^{9+2\,M}\right)\,\left(1+q^{9+2\,M}\right)\,\left(-q^{10+2\,M}-q^{12+2\,M}-q^{15+2\,M}+q^{31+6\,M}+q^{33+6\,M}+q^{35+6\,M}+q^{35+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31+6\,M}+q^{31
                                                                              z + q^2 \; z + q^4 \; z + q^6 \; z + q^8 \; z + q^{10} \; z + q^{20+4 \, \text{M}} \; z - q^{21+4 \, \text{M}} \; z - q^{22+4 \, \text{M}} \; z - 2 \; q^{24+4 \, \text{M}} \; z - q^{22+4 \, \text{M}} \; z - q^{
                                                                              q^{26+4\,M}\;z\;-\;q^{28+4\,M}\;z\;-\;q^{30+4\,M}\;z\;-\;q^{41+8\,M}\;z\;+\;2\;q^{42+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;+\;q^{44+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;z\;-\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;2\;q^{43+8\,M}\;
                                                                              q^{10+2\,M}\,\,z^2-q^{12+2\,M}\,\,z^2-q^{14+2\,M}\,\,z^2+q^{31+6\,M}\,\,z^2+q^{33+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2\,\big)\,\,\,SUM\,[\,5\,+\,M\,]\,\,+\,\,2\,(\,10+2\,M\,\,z^2-q^{12+2\,M}\,\,z^2-q^{14+2\,M}\,\,z^2+q^{31+6\,M}\,\,z^2+q^{33+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34+6\,M}\,\,z^2+q^{34
q^{85+36\,M}\,\left(-\,1\,+\,q^{6+M}\right)\,\,\left(1\,+\,q^{6+M}\right)\,\,\left(-\,1\,+\,q^{9+2\,M}\right)\,\,\left(1\,+\,q^{9+2\,M}\right)\,\,\left(-\,1\,+\,q^{11+2\,M}\right)
                                  (1 + q^{11+2M}) (1 + q^{12+2M}) SUM[6 + M] == 0
```

(*Verifying the recurrence for even M*)

```
In[141]:= ClearAll[M, A, Z];
                                  MyQP [A_, q_, n_] := \prod_{k=0}^{n-1} (1 - A q^k);
                                  A[k_{-}, M_{-}] := \frac{z^{k} q^{-3 (M+k)^{2}} MyQP[z q^{2M}, q^{2}, k] MyQP[z^{-1} q^{2M}, q^{2}, k]}{q^{-3 M^{2}} MyQP[-q^{2 M+1}, -q, 2 k]};
                                     z) z^2 \left(-1 + q^{2+2} M z\right) \left(-1 + q^{4+2} M z\right) \left(q^{11+4} M + q^{13+4} M + q^{15+4} M - q^{4+2} M z - q^{6+2} M z - q^{7+2} M z - q^{8+2} 
                                                                               q^{9+2} z - q^{10+2} z - q^{11+2} z - q^{13+2} z - q^{15+2} z - q^{17+6} z + 2 q^{18+6} z - 2 q^{19+6} z + q^{20+6} z + z^2 + z^3 + z^4
```

```
q^2 z^2 + q^4 z^2 + q^6 z^2 + q^8 z^2 + q^{10} z^2 + q^{10+4} z^2 + q^{12+4} z^2 + q^{15+4} z^2 - q^{6+2} z^3 - q^{8+2} z^3 - q^{10+2} z^3)
                A[1, M] + q^{1+12M}z(-1+q^{4+2M}z)(-q^{19+6M}-q^{21+6M}-q^{23+6M}+q^{10+4M}z+q^{12+4M}z+q^{13+4M}z+q^{13+4M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}z+q^{14+2M}
                                                       2q^{14+4} × + 2q^{15+4} × + q^{16+4} × + 3q^{17+4} × + q^{18+4} × + 3q^{19+4} × + 2q^{21+4} × + q^{23+4} × + q^{25+8} × + q^{25+8}
                                                       2q^{26+8} z + 3q^{27+8} z - 4q^{28+8} z + 2q^{29+8} z - 2q^{30+8} z - q^{32+8} z - q^{4+2} z^2 - 2q^{6+2} z^2 - 2q^{6+2}
                                                       3 q^{8+2} M z^2 - q^{9+2} M z^2 - 4 q^{10+2} M z^2 - q^{11+2} M z^2 - 4 q^{12+2} M z^2 - 2 q^{13+2} M z^2 - 3 q^{14+2} M z^2 - 2 q^{15+2} M z^2 
                                                       2\,q^{16+2\,M}\,z^2-2\,q^{17+2\,M}\,z^2-q^{18+2\,M}\,z^2-q^{19+2\,M}\,z^2-q^{21+2\,M}\,z^2-q^{16+6\,M}\,z^2-2\,q^{18+6\,M}\,z^2-2\,q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,z^2-q^{20+6\,M}\,
                                                       2q^{21+6}mz^2 + 2q^{22+6}mz^2 - 4q^{23+6}mz^2 + 4q^{24+6}mz^2 - 3q^{25+6}mz^2 + 3q^{26+6}mz^2 + q^{28+6}mz^2 + q^{29+6}mz^2 
                                                       2q^{32+10\,M}z^2 - 3q^{33+10\,M}z^2 + 5q^{34+10\,M}z^2 - 3q^{35+10\,M}z^2 + 2q^{36+10\,M}z^2 + z^3 + q^2z^3 + 2q^4z^3 + 2q^6z^3 + 2q^4z^3 + 2q^6z^3 +
                                                       3q^8z^3 + 2q^{10}z^3 + 2q^{12}z^3 + q^{14}z^3 + q^{16}z^3 + q^{10+4}z^3 + 3q^{12+4}z^3 + 5q^{14+4}z^3 + 5q^{16+4}z^3 + q^{16+4}z^3 + q^{14+4}z^3 + q^{14+4}z^3 + q^{14}z^3 +
                                                     q^{17+4} z^3 + 3 q^{18+4} z^3 + q^{19+4} z^3 + 2 q^{20+4} z^3 + q^{21+4} z^3 - q^{22+4} z^3 + q^{23+4} z^3 - q^{24+4} z^3 + q^{23+4}
                                                     q^{24+8\,\text{M}}\,z^3-q^{25+8\,\text{M}}\,z^3-3\,q^{28+8\,\text{M}}\,z^3+2\,q^{29+8\,\text{M}}\,z^3-4\,q^{30+8\,\text{M}}\,z^3+q^{31+8\,\text{M}}\,z^3-2\,q^{32+8\,\text{M}}\,z^3-q^{6+2\,\text{M}}\,z^4-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{32+8\,\text{M}}\,z^3-q^{
                                                       2q^{8+2} m^2z^4 - 3q^{10+2} m^2z^4 - 3q^{12+2} m^2z^4 - 3q^{14+2} m^2z^4 - 2q^{16+2} m^2z^4 - q^{18+2} m^2z^4 - q^{18+6} m^2z^4 - 2q^{20+6} m^2z^4 + q^{20+6}
                                                       q^{21+6} m^2 z^4 - q^{22+6} m^2 z^4 + q^{24+6} m^2 z^4 + q^{25+6} m^2 z^4 + q^{27+6} m^2 z^4 + q^{14+4} m^2 z^5 + q^{16+4} m^2 z^5 + q^{18+4} m^2 z^5) A[2, M] -
q^{10+18M} (q^{25+6M} - q^{14+4M} z - q^{16+4M} z - q^{17+4M} z - q^{18+4M} z - 2 q^{19+4M} z - 2 q^{20+4M} z - 2 q^{21+4M} z -
                                                       2q^{23+4} Z - q^{25+4} Z - q^{31+8} Z + 3q^{32+8} Z - 2q^{33+8} Z + 3q^{34+8} Z + 2q^{36+8} Z + q^{38+8} Z + q^{6+2} Z^2 + q^{38+8}
                                                       2q^{8+2} z^2 + 3q^{10+2} z^2 + q^{11+2} z^2 + 4q^{12+2} z^2 + q^{13+2} z^2 + 4q^{14+2} z^2 + 2q^{15+2} z^2 + 3q^{16+2} z^2 + 3q^{16+2}
                                                     2q^{17+2} m z^2 + 2q^{18+2} m z^2 + 2q^{19+2} m z^2 + q^{20+2} m z^2 + q^{21+2} m z^2 + q^{23+2} m z^2 + q^{20+6} m z^2 + 2q^{22+6} m z^2 + 2q^{20+6} m z^2 + 2q
                                                     q^{24+6} z^2 + 2 q^{25+6} z^2 - 3 q^{26+6} z^2 + 3 q^{27+6} z^2 - 5 q^{28+6} z^2 + q^{29+6} z^2 - 4 q^{30+6} z^2 - 2 q^{31+6} z^2 - 4
                                                     q^{32+6} + q^{2} - 3 q^{33+6} + q^{2} - q^{35+6} + q^{2} - 3 q^{38+10} + q^{2} + 3 q^{39+10} + q^{2} - 7 q^{40+10} + q^{2} + 5 q^{41+10} + q^{2} - q^{40+10} + q
                                                     6 a^{42+10 \text{ M}} z^2 + 3 a^{43+10 \text{ M}} z^2 - 2 a^{44+10 \text{ M}} z^2 + a^{45+10 \text{ M}} z^2 - z^3 - a^2 z^3 - 2 a^4 z^3 - 3 a^6 z^3 - 3 a^8 z^3 - a^3 z^3 
                                                       3q^{10}z^3 - 3q^{12}z^3 - 2q^{14}z^3 - q^{16}z^3 - q^{18}z^3 - q^{12+4}z^3 - 3q^{14+4}z^3 - 6q^{16+4}z^3 - 6q^{18+4}z^3 - 6q
                                                     q^{19+4\,\text{M}}\,z^3-6\,q^{20+4\,\text{M}}\,z^3-q^{21+4\,\text{M}}\,z^3-2\,q^{22+4\,\text{M}}\,z^3-2\,q^{23+4\,\text{M}}\,z^3+q^{24+4\,\text{M}}\,z^3-q^{25+4\,\text{M}}\,z^3+2\,q^{26+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^{24+4\,\text{M}}\,z^3-q^
                                                     q^{27+4} z^3 + 2 q^{28+4} z^3 + q^{30+4} z^3 - q^{28+8} z^3 + q^{29+8} z^3 + q^{31+8} z^3 + 5 q^{32+8} z^3 - q^{33+8} z^3 + 2
                                                     9\ q^{34+8\ M}\ z^3-q^{35+8\ M}\ z^3+6\ q^{36+8\ M}\ z^3+3\ q^{37+8\ M}\ z^3+3\ q^{39+8\ M}\ z^3-q^{40+8\ M}\ z^3-q^{45+12\ M}\ z^3+4\ q^{46+12\ M}\ z^3-q^{46+12\ M}\ z^3+q^{46+12\ M}\ z^3-q^{46+12\ M}\ z^3+q^{46+12\ M}\ z^3-q^{46+12\ M}\ z^3-q
                                                       5q^{47+12M}z^3 + 5q^{48+12M}z^3 - 4q^{49+12M}z^3 + q^{50+12M}z^3 + q^{6+2M}z^4 + 2q^{8+2M}z^4 + 4q^{10+2M}z^4 + 5q^{12+2M}z^4 +
                                                       6\ q^{14+2\ M}\ z^4+5\ q^{16+2\ M}\ z^4+4\ q^{18+2\ M}\ z^4+2\ q^{20+2\ M}\ z^4+q^{22+2\ M}\ z^4+q^{20+6\ M}\ z^4+3\ q^{22+6\ M}\ z^4-q^{23+6\ M}\ z^4+q^{20+6\ M}\ z^4+q^{20+
                                                       3 q^{24+6} z^4 - q^{25+6} z^4 + q^{26+6} z^4 - 2 q^{27+6} z^4 - 2 q^{28+6} z^4 - 2 q^{29+6} z^4 - 3 q^{30+6} z^4 - 2 q^{31+6} z^4 - 2 q^{31+
                                                       2\,q^{32+6\,M}\,z^4-q^{33+6\,M}\,z^4-q^{34+6\,M}\,z^4-q^{37+10\,M}\,z^4-q^{38+10\,M}\,z^4-4\,q^{40+10\,M}\,z^4+2\,q^{41+10\,M}\,z^4-3\,q^{42+10\,M}\,z^4+2\,q^{41+10\,M}\,z^4-q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41+10\,M}\,z^4+q^{41
                                                     q^{43+10\,\text{M}}\,z^4-q^{14+4\,\text{M}}\,z^5-2\,q^{16+4\,\text{M}}\,z^5-3\,q^{18+4\,\text{M}}\,z^5-3\,q^{20+4\,\text{M}}\,z^5-2\,q^{22+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{30+8\,\text{M}}\,z^5+q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q^{24+4\,\text{M}}\,z^5-q
                                                       q^{31+8} z^5 + q^{32+8} z^5 + q^{33+8} z^5 + q^{34+8} z^5 + q^{35+8} z^5 + q^{37+8} z^5 + q^{24+6} z^6) A[3, M] -
q^{27+24\,\text{M}}\,\left(q^{18+4\,\text{M}}+q^{21+4\,\text{M}}+q^{23+4\,\text{M}}-q^{36+8\,\text{M}}-q^{38+8\,\text{M}}-q^{40+8\,\text{M}}-q^{8+2\,\text{M}}\,z-2\,q^{10+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,q^{12+2\,\text{M}}\,z-2\,
                                                     q^{13+2\,M}\,z\,-\,2\,q^{14+2\,M}\,z\,-\,q^{15+2\,M}\,z\,-\,2\,q^{16+2\,M}\,z\,-\,q^{17+2\,M}\,z\,-\,q^{18+2\,M}\,z\,-\,q^{19+2\,M}\,z\,-\,q^{21+2\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,q^{27+6\,M}\,z\,+\,
                                                       2q^{28+6}mz + 4q^{30+6}mz + q^{31+6}mz + 2q^{32+6}mz + 4q^{33+6}mz + 3q^{35+6}mz + q^{37+6}mz + q^{44+10}mz -
                                                       2q^{45+10} M z + 3q^{46+10} M z - 4q^{47+10} M z + 2q^{48+10} M z - 2q^{49+10} M z - q^{51+10} M z + z^2+q^2 z<sup>2</sup> + 2q^4 z<sup>2</sup> +
                                                     2q^{20+4}mz^2-q^{22+4}mz^2-2q^{24+4}mz^2-4q^{26+4}mz^2-3q^{28+4}mz^2-2q^{30+4}mz^2-q^{32+4}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^2-q^{34+8}mz^
                                                     q^{35+8} M z^2 - 3 q^{36+8} M z^2 - 4 q^{38+8} M z^2 - q^{39+8} M z^2 + q^{40+8} M z^2 - 4 q^{41+8} M z^2 + 4 q^{42+8} M z^2 - 2 q^{43+8} M z^2 + 4
                                                     a^{44+8} a^{2} + a^{46+8} a^{2} + 2a^{53+12} a^{2} - 3a^{54+12} a^{2} + 5a^{55+12} a^{2} - 3a^{56+12} a^{2} + 2a^{57+12} a^{2} - 3a^{2}
                                                     q^{8+2\,\text{M}}\,z^3-2\,q^{10+2\,\text{M}}\,z^3-3\,q^{12+2\,\text{M}}\,z^3-3\,q^{14+2\,\text{M}}\,z^3-3\,q^{16+2\,\text{M}}\,z^3-2\,q^{18+2\,\text{M}}\,z^3-q^{20+2\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q^{27+6\,\text{M}}\,z^3+q
                                                     q^{28+6} z^3 + 2 q^{29+6} z^3 + 3 q^{30+6} z^3 + 2 q^{31+6} z^3 + 3 q^{32+6} z^3 + 2 q^{33+6} z^3 + 2 q^{34+6} z^3 + q^{35+6} z^3 + q^{35+6}
                                                       q^{36+6\,M}\,z^3+q^{44+10\,M}\,z^3-q^{45+10\,M}\,z^3+q^{46+10\,M}\,z^3-2\,q^{47+10\,M}\,z^3-q^{49+10\,M}\,z^3-q^{50+10\,M}\,z^3+q^{18+4\,M}\,z^4+q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,z^3-q^{44+10\,M}\,
                                                       q^{20+4} z^4 + q^{22+4} z^4 - q^{36+8} z^4 - q^{37+8} z^4 - q^{39+8} z^4 \right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) \left(1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left(-1 + q^{9+2} M\right) A[4, M] - q^{52+30} M \left
                        \left(-q^{10+2\,M}-q^{12+2\,M}-q^{15+2\,M}+q^{31+6\,M}+q^{33+6\,M}+q^{35+6\,M}+z+q^2\,z+q^4\,z+q^6\,z+q^8\,z+q^{10}\,z+q^{10}\right)
                                                     q^{20+4\,\text{M}}\;z\;-\;q^{21+4\,\text{M}}\;z\;-\;q^{22+4\,\text{M}}\;z\;-\;2\;q^{24+4\,\text{M}}\;z\;-\;q^{26+4\,\text{M}}\;z\;-\;q^{28+4\,\text{M}}\;z\;-\;q^{30+4\,\text{M}}\;z\;-\;q^{41+8\,\text{M}}\;z\;+\;2\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+8\,\text{M}}\;z\;-\;q^{42+
                                                       2\,q^{43+8\,M}\,z\,+\,q^{44+8\,M}\,z\,-\,q^{10+2\,M}\,z^2\,-\,q^{12+2\,M}\,z^2\,-\,q^{14+2\,M}\,z^2\,+\,q^{31+6\,M}\,z^2\,+\,q^{33+6\,M}\,z^2\,+\,q^{34+6\,M}\,z^2\big)\,\,A\,[\,5\,,\,M\,]\,+\,2\,q^{43+8\,M}\,z\,+\,q^{44+8\,M}\,z^2\,+\,q^{44+8\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,M}\,z^2\,+\,q^{44+6\,
q^{85+36\,M} \left(-1+q^{6+M}\right) \left(1+q^{6+M}\right) \left(-1+q^{9+2\,M}\right) \left(1+q^{9+2\,M}\right) \left(-1+q^{11+2\,M}\right)
                     (1+q^{11+2M})(1+q^{12+2M})A[6, M]) // Simplify
```

```
14 | VOA-T-tilde.nb
                     lo[e] = MyQP[A_, q_, n_] := \prod_{k=1}^{n-1} (1 - A q^k);
                                                                   f[k_{\perp}] := QPochhammer[q^k, q^k];
                                                                 ClearAll[M, N1, N2, N3, N4, N5, N6, z1, z2];
                                                                 SumMax = 5;
                                                                   PowerMax = 20;
                                                                 \begin{split} \textbf{S1} &= \textbf{Normal} \Big[ \textbf{Series} \Big[ \sum_{N1=0}^{\textbf{SumMax}} \sum_{N2=0}^{\textbf{SumMax}} \sum_{N3=0}^{\textbf{SumMax}} \sum_{N4=0}^{\textbf{SumMax}} \sum_{N5=0}^{\textbf{SumMax}} \sum_{N6=0}^{\textbf{SumMax}} \left( -1 \right)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ q^{N1^2+N2^2+N3^2+N4^2+N5^2+N6^2+N1} \sum_{N3=0}^{\textbf{N2}} \sum_{N4=0}^{\textbf{N2}} \sum_{N5=0}^{\textbf{N2}} \sum_{N6=0}^{\textbf{N2}} \left( -1 \right)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ q^{N1^2+N2^2+N3^2+N4^2+N5^2+N6^2+N1} \sum_{N3=0}^{\textbf{N2}} \sum_{N4=0}^{\textbf{N2}} \sum_{N5=0}^{\textbf{N2}} \sum_{N6=0}^{\textbf{N2}} \left( -1 \right)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ q^{N1^2+N2^2+N3^2+N4^2+N5^2+N6^2+N1} \sum_{N3=0}^{\textbf{N2}} \sum_{N4=0}^{\textbf{N2}} \sum_{N5=0}^{\textbf{N2}} \sum_{N6=0}^{\textbf{N2}} \left( -1 \right)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ q^{N1^2+N2^2+N3^2+N4^2+N5^2+N6^2+N1} \sum_{N3=0}^{\textbf{N2}} \sum_{N3=
                                                                                                                                                                                                 / (MyQP[q<sup>2</sup>, q<sup>2</sup>, N1] MyQP[q<sup>2</sup>, q<sup>2</sup>, N2] MyQP[q<sup>2</sup>, q<sup>2</sup>, N3]
                                                                                                                                                                                                                       \label{eq:myQPq2} \text{MyQP}\left[q^2\text{, }q^2\text{, N4}\right] \text{MyQP}\left[q^2\text{, }q^2\text{, N5}\right] \text{MyQP}\left[q^2\text{, }q^2\text{, N6}\right]\right), \\ \left\{q\text{, 0}, \text{PowerMax}\right\}\right]\right];
                                                                S2 = Normal[Series[ \frac{\text{QPochhammer}[z1z2,-q]}{\text{QPochhammer}[-q,q^2]} \xrightarrow{\text{SumMax}} \frac{q^{\text{M}^2} \text{ MyQP}[z1^2,q^2,\text{M}] \text{ MyQP}[z2^2,q^2,\text{M}]}{\text{MyQP}[q^2,q^2,\text{M}] \text{ MyQP}[z1z2,-q,2\text{M}]} - \frac{1}{2} = \frac{1}{2} =
                                                                                                                         \frac{\text{QPochhammer}\,[\,-\,\text{z1}\,\,\text{z2}\,,\,-\,\text{q}\,]}{\text{QPochhammer}\,[\,-\,\text{q}\,,\,\,\text{q}^{2}\,]} \overset{\text{SumMax}}{\overset{\text{M}}{\longrightarrow}} \frac{\left(\text{z1}\,+\,\text{z2}\right)\,\text{q}^{\text{M}^{2}+2\,\text{M}}\,\,\text{MyQP}\left[\,\text{z1}^{2}\,,\,\,\text{q}^{2}\,,\,\,\text{M}\,\right]\,\,\text{MyQP}\left[\,\text{z2}^{2}\,,\,\,\text{q}^{2}\,,\,\,\text{M}\,\right]}{\text{MyQP}\left[\,\text{q}^{2}\,,\,\,\text{q}^{2}\,,\,\,\text{M}\,\right]\,\,\text{MyQP}\left[\,-\,\text{z1}\,\,\text{z2}\,,\,\,-\,\text{q}\,,\,\,\text{2}\,\,\text{M}\,+\,\,\text{1}\,\right]},\,\,\{\text{q}\,,\,\,\text{MyQP}\left[\,\text{q}^{2}\,,\,\,\text{q}^{2}\,,\,\,\text{M}\,\right]\,\,\text{MyQP}\left[\,\text{q}^{2}\,,\,\,\text{q}^{2}\,,\,\,\text{M}\,\right]}
                                                                                                                         0, PowerMax}]];
                                                                 S1 -
                                                                                        S2 //
                                                                            Simplify
                  Out[ • ]= 0
                     ln[a]:= MyQP[A_, q_, n_] := \prod_{k=0}^{n-1} (1 - A q^k);
                                                                 f[k_{-}] := QPochhammer[q^{k}, q^{k}];
                                                                 ClearAll[M, N1, N2, N3, N4, N5, N6, z1, z2];
                                                                 SumMax = 5;
                                                                   PowerMax = 20;
                                                                    z2 = 1;
                                                                 \begin{aligned} \textbf{S1} &= \textbf{Normal} \Big[ \textbf{Series} \Big[ \sum_{N1=0}^{\textbf{SumMax}} \sum_{N2=0}^{\textbf{SumMax}} \sum_{N3=0}^{\textbf{SumMax}} \sum_{N5=0}^{\textbf{SumMax}} \sum_{N6=0}^{\textbf{SumMax}} \Big( -1 \Big)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ q^{N1^2+N2^2+N3^2+N4^2+N5^2+N6^2+N1} \ N2+N1 \ N3+N1 \ N5+N1 \ N6+N2 \ N3+N2 \ N4+N2 \ N6+N3 \ N4+N3 \ N5+2 \ N3 \ N6+N4 \ N5+N4 \ N6+N5 \ N6- \ (N1+N2+N6) \\ \end{aligned} 
                                                                                                                                                                                                / (MyQP[q<sup>2</sup>, q<sup>2</sup>, N1] MyQP[q<sup>2</sup>, q<sup>2</sup>, N2] MyQP[q<sup>2</sup>, q<sup>2</sup>, N3]
```

```
ln[=]:= MyQP[A_, q_, n_] := \prod_{k=0}^{n-1} (1 - Aq^k);
            f[k_{-}] := QPochhammer[q^{k}, q^{k}];
            ClearAll[M, N1, N2, N3, N4, N5, N6, z1, z2];
            SumMax = 5;
            PowerMax = 20;
            z2 = -1;
            \begin{split} \textbf{S1} &= \textbf{Normal} \Big[ \textbf{Series} \Big[ \sum_{N1=0}^{\textbf{SumMax}} \sum_{N2=0}^{\textbf{SumMax}} \sum_{N3=0}^{\textbf{SumMax}} \sum_{N4=0}^{\textbf{SumMax}} \sum_{N5=0}^{\textbf{SumMax}} \sum_{N6=0}^{\textbf{SumMax}} \left( -1 \right)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ q^{N1^2+N2^2+N3^2+N4^2+N5^2+N6^2+N1} \sum_{N3=0}^{\textbf{N2}} \sum_{N4=0}^{\textbf{N2}} \sum_{N5=0}^{\textbf{N2}} \sum_{N6=0}^{\textbf{N2}} \left( -1 \right)^{N1+N2+N6} \ \textbf{z1}^{N1+N3+N4+N6} \ \textbf{z2}^{N2+N3+N5+N6} \\ \end{split} 
                                             /\left(\text{MyQP}\left[\text{q}^2,\,\text{q}^2,\,\text{N1}\right]\,\text{MyQP}\left[\text{q}^2,\,\text{q}^2,\,\text{N2}\right]\,\text{MyQP}\left[\text{q}^2,\,\text{q}^2,\,\text{N3}\right]
           S1 - S2 // Simplify
Out[ • ]= 0
```