```
N = 146 = 2*73

By the Ibukiyama-Kitayama dimension formula,
 dim(S_4(K(146))) = 57

By the Skoruppa-Zagier dimension formula and Jacobi restriction,
 the lift dimension of S_4(K(146))^+ is 25
 the nonlift dimension of S_4(K(146))^+ is heuristically 24
 dim(S_4(K(146))^+) thus is heuristically 49
 dim(S_4(K(146))^-) is heuristically 8

The heuristic dimensions are correct by the spanning results to follow

dim(J_{2,146}^{cusp}) = 2 (Skoruppa-Zagier), so need to span to within 1 dimension

q = 7 for TraceDown
After TD(Grit(J_{4,1022}^{cusp})) and (Grit(J_{2,146}^{cusp}))^2,
 spanned rank in S_4(K(146))^+ is 49
 spanned rank in S_4(K(146))^- is 0

Hecke operators applied: {{{2, 2}}, {{2, 2}, {2, 1}}, {{2, 2}, {3, 1}}}
After Hecke spreading,
 spanned rank in S_4(K(146))^- is 7

After Borcherds products,
 spanned rank in S_4(K(146))^- is 8

Final spanned rank in S_4(K(146))^+ is 49
Final spanned rank in S_4(K(146))^- is 8

--------------------------------------------------------------------------------

S_2(K(146)) is determined by Jacobi restriction and the H4Ndd(2,+) test
 (H_4(146,2,2)^+ = 0)

So S_2(K(146)) = Grit(J_{2,146}^{cusp}) (dimension 2)
```