```
N = 143 = 11*13

By the Ibukiyama-Kitayama dimension formula,
 dim(S_4(K(143))) = 44

By the Skoruppa-Zagier dimension formula and Jacobi restriction,
 the lift dimension of S_4(K(143))^+ is 23
 the nonlift dimension of S_4(K(143))^+ is heuristically 17
 dim(S_4(K(143))^+) thus is heuristically 40
 dim(S_4(K(143))^-) is heuristically 4

The heuristic dimensions are correct by the spanning results to follow

dim(J_{2,143}^{cusp}) = 1 (Skoruppa-Zagier), so need to span completely

q = 5 for TraceDown
After TD(Grit(J_{4,715}^{cusp})) and (Grit(J_{2,143}^{cusp}))^2,
 spanned rank in S_4(K(143))^+ is 40
 spanned rank in S_4(K(143))^- is 0

After Borcherds products,
 spanned rank in S_4(K(143))^- is 4

Final spanned rank in S_4(K(143))^+ is 40
Final spanned rank in S_4(K(143))^- is 4

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

S_2(K(143))^+ is determined by Jacobi restriction and the H4Nd1(1,+) test
 (dim(H_4(143,1,1)^+) <= 1 and this is less than dim(J_{2,143}^{cusp})+1 = 2)
S_2(K(143))^- = 0 by Jacobi restriction and the H4Nd1(1,-) test
 (dim(H_4(143,1,1)^-) <= 0 and this is less than dim(J_{2,143}^{cusp}) = 1)

So S_2(K(143)) = Grit(J_{2,143}^{cusp}) (dimension 1)
```