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Dataset Open Access

Set of N integers between -30 and 30 with sum and cubic sum up to zero for 4<N<13

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Anomalies

Solutions obtained with the python package: anomalies based on the method to find anomaly free solutions of the standard model extended with an Abelian Dark Symmetry with ***N*** right-handed singlet chiral fields described in arXiv:1905.13729 [PRL]:

Data scheme

- 'l': integer lists → input to obtain the 'solution' by using the anomalies package
- 'k': integer lists → input to obtain the 'solution' by using hte anomalies package
- 'solution': list → of integers, z_i which satisfy $\sum_{i=1}^{N} z_i = 0$ and $\sum_{i=1}^{N} z_i^3 = 0$.
- 'n': integer → number of integers in 'solution', ***N***.

USAGE

```
#Example of JSON file usage in Python with pandas (see also json module)
>>> import pandas as pd
>>> df=pd.read_json('solutions.json')
>>> df[:2]
          l        k            solution  gcd  n
0    [1, 2]  [0, -3]   [1, 5, -7, -8, 9]    1  5
1  [-2, -1]  [0, -1]  [2, 4, -7, -9, 10]    1  5
```

Data:

390074 solutions with $5 \leq N \leq 12$ integers until `|32|` [JSON]

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Versions

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