

Ramanujan and Polynomials

Find the link to the problem doc [here](#)

Input Format

Please refer to the problem doc

Constraints

Please refer to the problem doc

Kindly go through the "Notes" section of the problem doc for important information.

Output Format

Please refer to the problem doc

Sample Input 0

```
3
1
complex
5
8 6 7 1 -3 4 -4 0 1 -1
6
8 1 3 -8 -10 1 -7 8 10 -8 -10 -4
2
float
5
0.42 -3.27 6.08 -9.46 2.54
-5
3
float
5
-4.77 5.35 7.56 5.23 -5.49
```

Sample Output 0

```
58 56 127 -31 -85 -76 -184 51 94 27 46 -205 -45 5 7 19 42 -2 -14 6
2938.770000
5.350000 15.120000 15.690000 -21.960000
```

Sample Input 1

```
3
1
integer
2
-79 -36
4
-33 -12 38 -41
1
float
```

Sample Output 1

Sample Input 2

Sample Output 2

Sample Input 3

Sample Output 3

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48.330000 154.020000 -34.380000 66.400000 60.550000

Sample Input 4

```
8
1
float
1
-5
2
1.2 -3.8
1
integer
3
3 0 5
3
-5 0 1
1
complex
3
1 -2 3 4 -5 0
2
-7 8 9 -10
2
integer
4
7 -5 0 3
2
2
float
4
7 -5.2 19.6 -3.578
2
2
string
4
7 -5 6 abc
2
3
integer
4
7 -5 0 3
3
float
4
7 -5.2 0 3.5
```

Sample Output 4

```
-6.000000 19.000000
-15 0 -22 0 5
9 22 -64 -32 102 -34 -45 50
21
46.376000
abcabcabcabcabcabcabc6666-5-57
-5 0 9
-5.200000 0.000000 10.500000
```

Sample Input 5

```
10
3
integer
6
```

```
-867 -553 167 -311 -207 -970
2
integer
4
841 -408 -919 748
1
3
float
4
-484.74 -522.71 -480.73 -860.98
2
string
3
rMWVZ Ld2yBM 6o9lH
2
1
integer
6
-72 829 557 328 -238 682
4
231 219 -135 738
3
float
3
-844.87 -822.06 211.16
1
complex
3
-269 292 -736 -410 -429 186
3
650 -323 -631 -595 -611 -405
3
float
2
777.67 537.8
2
integer
3
-490 -318 -546
9
1
complex
5
141 -495 -743 691 428 566 318 894 -253 -601
4
916 -798 -48 424 262 -321 795 166
```

Sample Output 5

```
-553 334 -933 -828 -4850
262
-522.710000 -961.460000 -2582.940000
6o9lH6o9lH6o9lH6o9lHLd2yBMLd2yBMrMWVZ
-16632 175731 319938 32700 553461 472206 423552 -267714 503316
-822.060000 422.320000
-80534 276687 -267351 -52969 284313 886630 665015 686479 337449 60099
537.800000
-47578
-265854 -565938 73942 1309414 464443 -346239 965582 768870 -1517235 180209 883562 574744 -154801 687269
-101369 -519793
```

Sample Input 6

```
25
1
complex
```

11
-490 -529 -711 70 -211 901 179 -515 883 -760 -917 -750 104 -953 489 -120 -478 -537 756 -729 -511 -682
2
714 -796 -362 -954
3
float
4
-722.74 289.48 -814.07 -258.19
1
integer
10
-243 116 -947 -610 433 -64 942 318 307 -282
4
-828 149 -930 14
1
float
11
-236.26 144.85 359.17 312.02 -788.77 -453.36 -251.05 858.96 -601.49 966.48 -986.01
8
452.26 670.04 253.77 -104.78 71.16 -952.18 -269.53 -451.65
1
integer
11
130 508 -273 574 936 -212 724 -605 898 866 883
4
204 -605 -707 624
3
integer
5
967 659 994 475 35
2
string
5
QCDZWN X3zjlpos9 J85kxdj SAFsu GKd2
1
2
string
5
5FRrN uxJbVD B keHtG n2JPq
3
1
float
2
488.7 -510.1
2
-507.66 -954.59
3
float
3
95.71 275.26 232.7
1
complex
11
431 -178 466 249 946 389 401 -525 240 712 -807 69 -490 -343 -249 -851 -833 442 -718 303 121 376
3
425 511 -487 279 -535 -230
3
float
5
-26.92 -606.3 792.57 -644.41 -85.71
3
integer
10
-525 436 -509 48 -342 995 -727 112 -623 497
3
float
10
753.71 107.57 739.26 315.12 -440.0 -161.65 -207.76 751.52 565.61 -841.79
3
integer
7

Sample Output 6

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1110978 -309888 -37935 403358 -240145 -173229 671733 -171132 289989 -146318 21745 -228990
-606.300000 1585.140000 -1933.230000 -342.840000
436 -1018 144 -1368 4975 -4362 784 -4984 4473
107.570000 1478.520000 945.360000 -1760.000000 -808.250000 -1246.560000 5260.640000 4524.880000 -7576.110000
94 2 2910 988 -2375 1680
2038723879598
651 1478 -2589 320 -2360
301 796 -75
-726 130 -279 512 -3290 -5250
-920 606 1017 -36
-3736050887
-422268 -826753 89452 904961 231628 376096 2013045 363784 -1596286 -594174 -281415 -802472 -449292 591578
290578 481794 -137939
246.660000 -1850.300000 1435.110000 -340.240000 1106.600000 2886.240000 -1372.140000
643 1196 -2124 -3208 1890 1464
238919 -301420 1018277 -540616 267148 -341041 -345516 -1732833 1577187 -1836338 1330060 314347 -1388405
-998469 -410560 -1611957 -55824 493335 493685 2688488 3641746 -176798 1103917 1055425 -914355 2188257 52189
-882430 1734997 -239459 -1081151 -218437 -1352811 25221 -634112 -415693 -73670 716327