Syrian Arab Republic

Lattakia - Tishreen University

Department of Communication and electrical engineering

5th , Network Programming : Homework No1

الجمهورية العربية السورية

اللاذقية- جامعة تشرين

كلية الهندسة الميكانيكية والكهربائية

قسم هندسة الاتصالات والالكترونيات

السنة الخامسة

الوظيفة الأولى برمجة شبكات

رغد بسام حسن

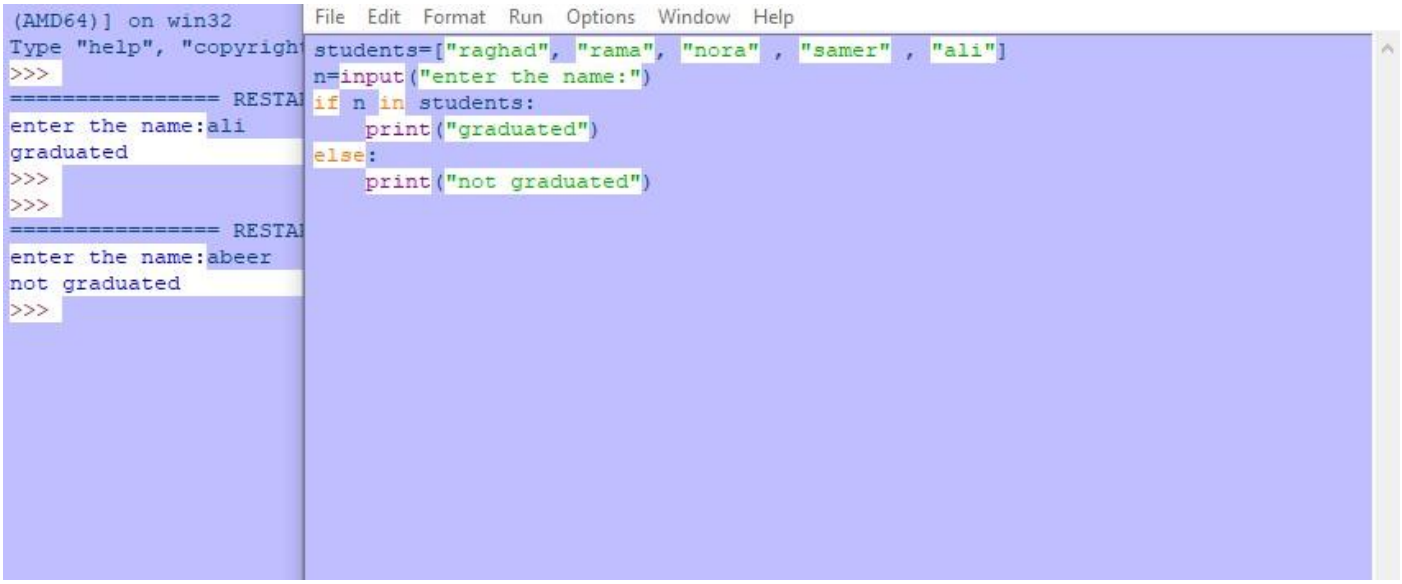
2573

First Network Programming Homework

Question 1

A-Define a list that contain the names of graduated students "5 students " :

Create a program that accept student name and prints if the user is graduated or not .



عرفنا مصفوفة وضعنا فيها أسماء لطلاب متخرجين في حال كان الاسم المدخل ضمن مصفوفة الطلاب يطبع متخرج والا يطبع غير متخرج عن طريق استخدام if/else الشرطية.

B- Generate and print a list of odd numbers from 1 to 1000.

```
[1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41,
43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81,
83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117,
 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149,
 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181,
 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213,
 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245,
 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277,
 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309,
 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341,
 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373,
 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405,
 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437,
 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469,
 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501,
 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533,
 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565,
 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597,
 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629,
 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661,
 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693,
 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725,
 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757,
 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789,
 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821,
 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853,
 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885,
 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917,
 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949,
 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981,
 983, 985, 987, 989, 991, 993, 995, 997, 999]
>>>
```

```
File  Edit  Format  Run  Options  Window  Help
list=[i for i in range(1001)if i%2==1]
print(list)
```

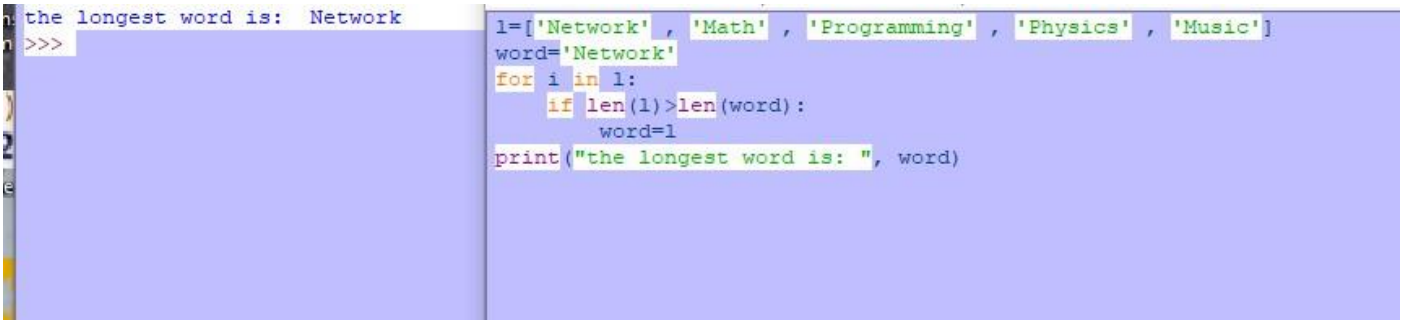
هذا البرنامج يقوم بطباعة الأعداد الفردية فقط باستخدام حلقة for بخطوة بمقدار واحد والمجال من 0 إلى 1000 وذلك في حال كان باقي قسمة العدد على 2 يساوي 1 .

C- L=[‘Network’ , ’Math’ , ’Programming’, ‘Physics’ , ‘Music]

In this exercise, you will implement a Python program that reads the items of the previous list and identifies

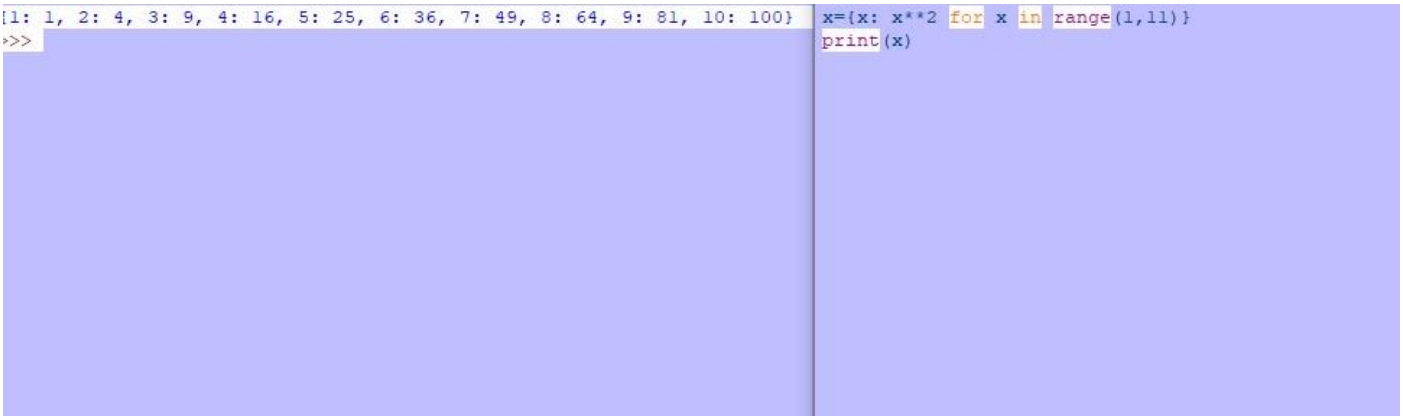
the items that starts with ‘P’ letter, then print it on screen.

Tips: using loop, list ‘len ()’ method



من القائمة المتوفرة لدينا نفرض أن الكلمة الأطول هي الأولى بحيث يتم تخزينها في المتحول word ونستخدم الحلقة for للمرور على عناصر القائمة ومقارنتها مع الكلمة المفروضة ، ويتم طباعة الكلمة الأطول.

D- Using Dictionary comprehension, Generate this dictionary
d={1:1,2:4,3:9,4:16,5:25,6:36,7:42,8:64,9:81,10:10}

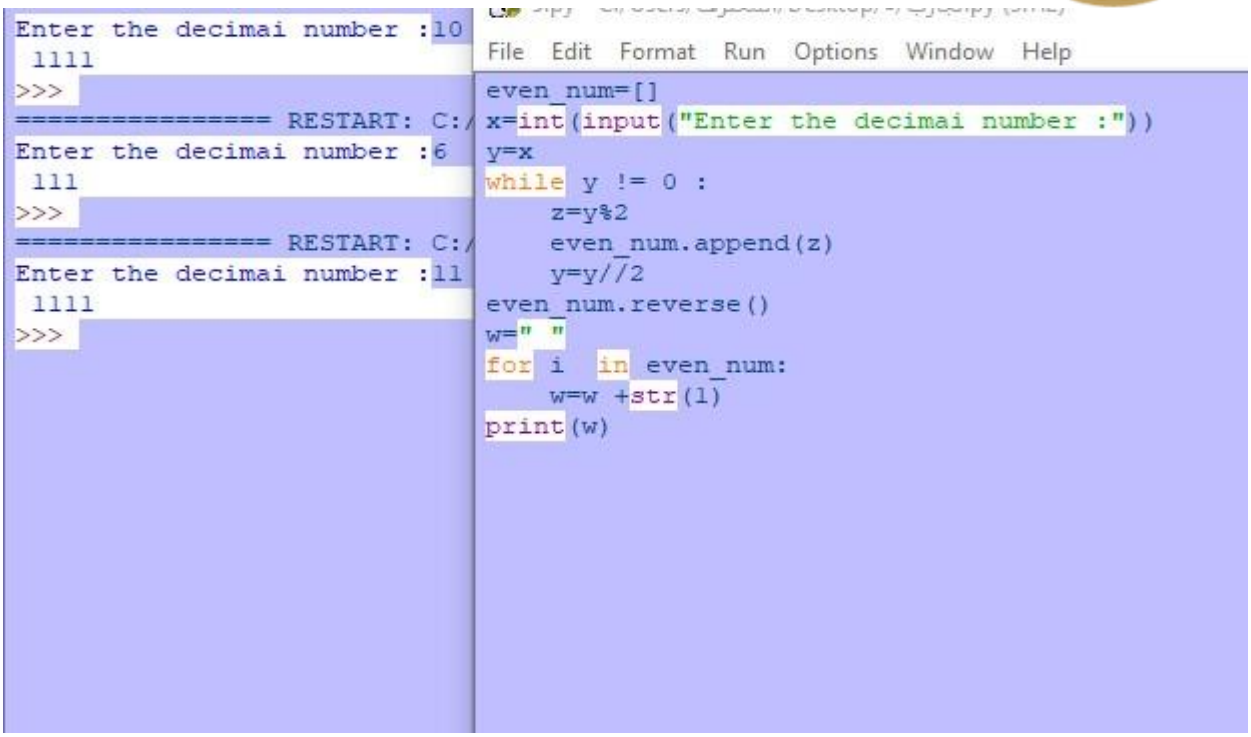


Question 2

.Write a Python program that converts a decimal number into its equivalent binary number

The program should start reading the decimal number from the user. Then the binary equivalent number .must be calculated. Finally, the program must display the equivalent binary number on the screen

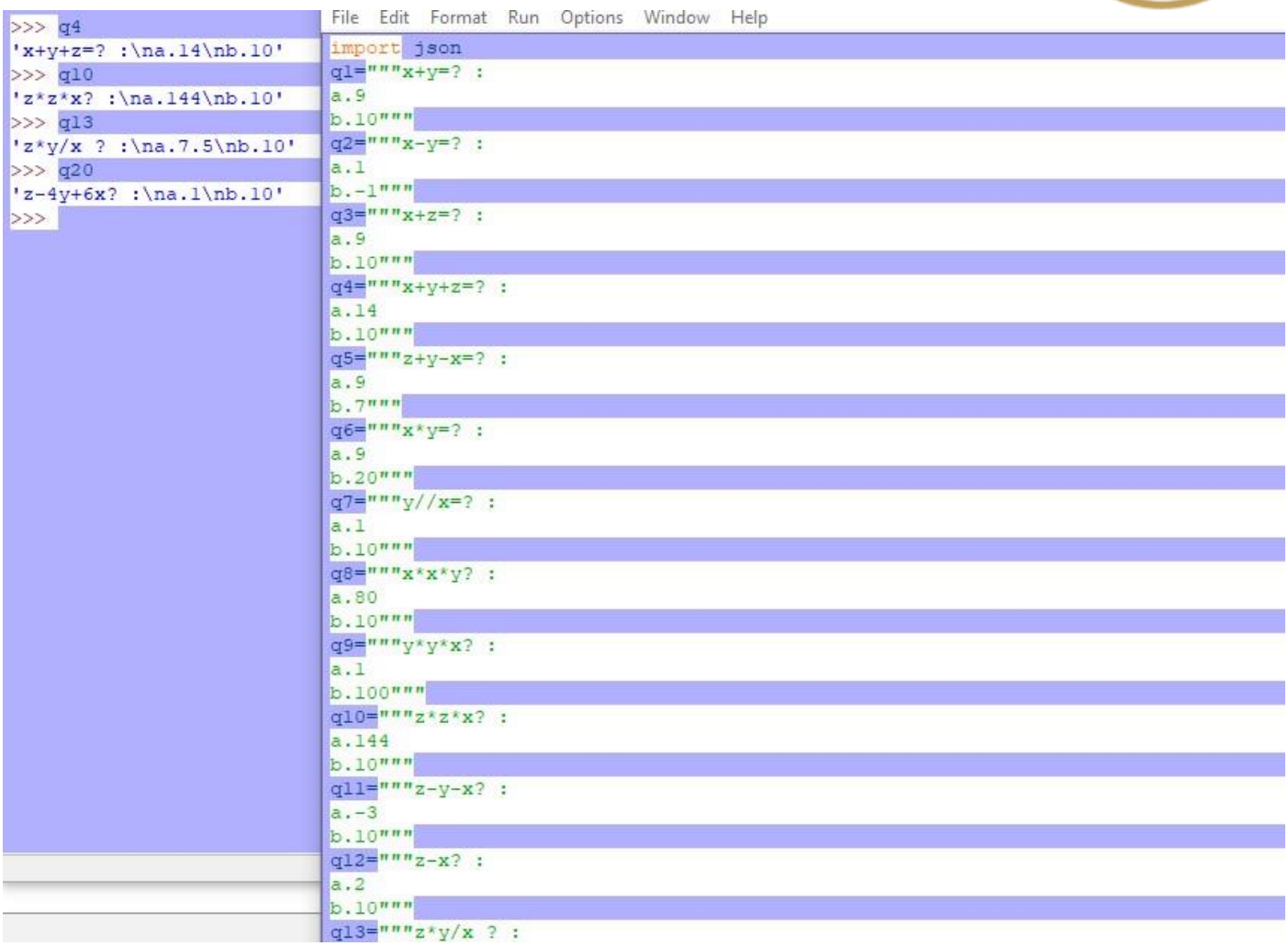
Tips: use empty list to hold binary number, use loop, use % operator, use // operator, use list append .method, reverse the list

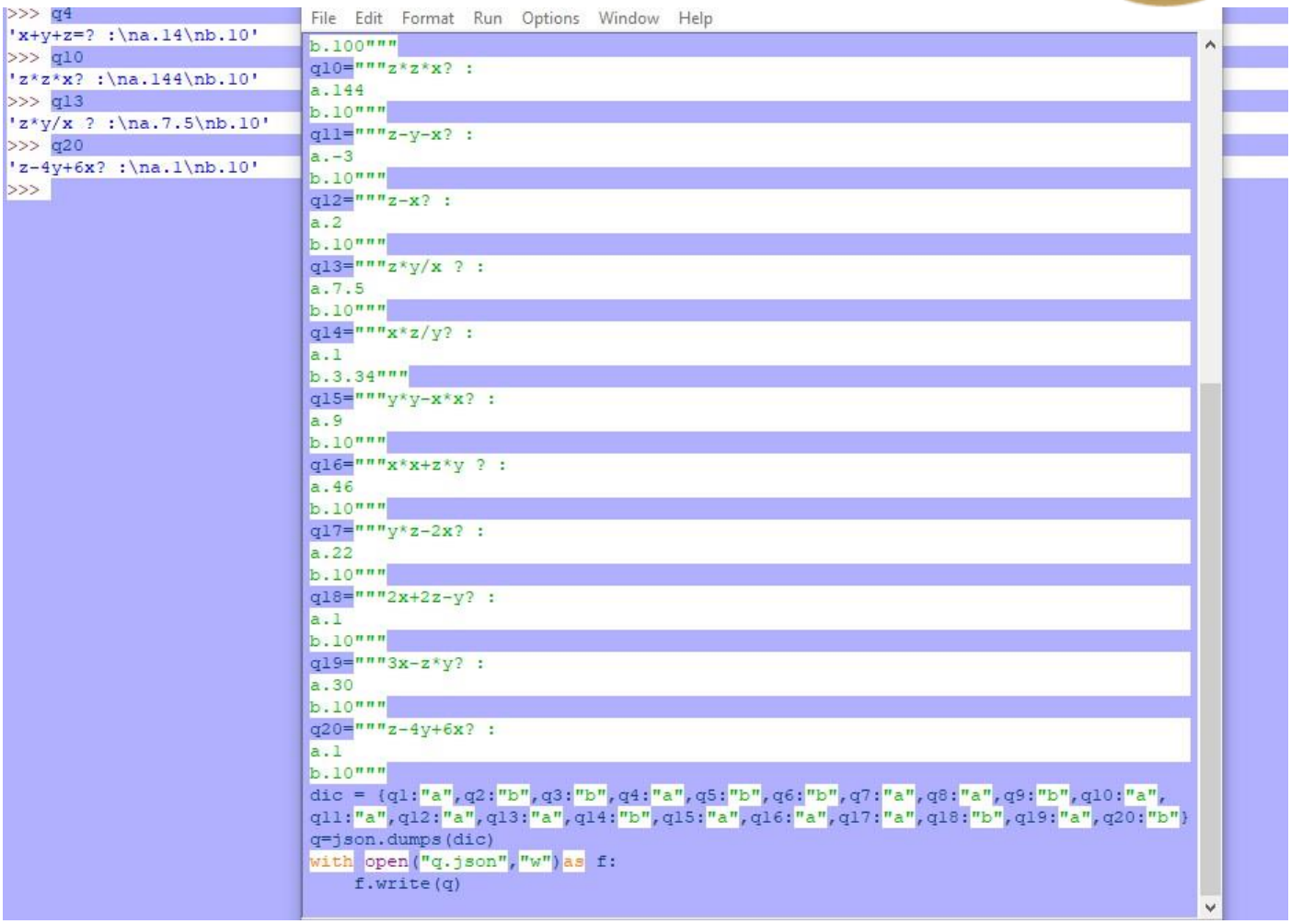


نعرف مصفوفة الرقم الثنائي التي سوف تظهر لدينا عند تنفيذ البرنامج ونفرض أنه طالما العدد العشري المدخل لا يساوي الصفر سنأخذ باقي قسمته على 2 ونضيفه إلى مصفوفة العدد الثنائي وهكذا إلى أن يكون باقي قسمة العدد العشري المدخل يساوي الصفر ونسنده إلى مصفوفة العدد الثنائي وتخرجه المصفوفة على شكل string.

Question 3:

Type python quiz program that takes a text or json or csv file as input for (20 (Questions, Answers)). It asks the questions and finally computes and prints user results and store user name and result in separate file


>>> q4
'x+y+z=? :\na.14\nb.10'
>>> q10
'z*z*x? :\na.144\nb.10'
>>> q13
'z*y/x ? :\na.7.5\nb.10'
>>> q20
'z-4y+6x? :\na.1\nb.10'
>>>
File Edit Format Run Options Window Help
import json
q1="""x+y=? :
a.9
b.10"""
q2="""x-y=? :
a.1
b.-1"""
q3="""x+z=? :
a.9
b.10"""
q4="""x+y+z=? :
a.14
b.10"""
q5="""z+y-x=? :
a.9
b.7"""
q6="""x*y=? :
a.9
b.20"""
q7="""y//x=? :
a.1
b.10"""
q8="""x*x*y? :
a.80
b.10"""
q9="""y*y*x? :
a.1
b.100"""
q10="""z*z*x? :
a.144
b.10"""
q11="""z-y-x? :
a.-3
b.10"""
q12="""z-x? :
a.2
b.10"""
q13="""z*y/x ? :


>>> q4
'x+y+z=? :\na.14\nb.10'
>>> q10
'z*z*x? :\na.144\nb.10'
>>> q13
'z*y/x ? :\na.7.5\nb.10'
>>> q20
'z-4y+6x? :\na.1\nb.10'
>>>
File Edit Format Run Options Window Help
b.100"""
q10="""z*z*x? :
a.144
b.10"""
q11="""z-y-x? :
a.-3
b.10"""
q12="""z-x? :
a.2
b.10"""
q13="""z*y/x ? :
a.7.5
b.10"""
q14="""x*z/y? :
a.1
b.3.34"""
q15="""y*y-x*x? :
a.9
b.10"""
q16="""x*x+z*y ? :
a.46
b.10"""
q17="""y*z-2x? :
a.22
b.10"""
q18="""2x+2z-y? :
a.1
b.10"""
q19="""3x-z*y? :
a.30
b.10"""
q20="""z-4y+6x? :
a.1
b.10"""
dic = {q1:"a",q2:"b",q3:"b",q4:"a",q5:"b",q6:"b",q7:"a",q8:"a",q9:"b",q10:"a",
q11:"a",q12:"a",q13:"a",q14:"b",q15:"a",q16:"a",q17:"a",q18:"b",q19:"a",q20:"b"}
q=json.dumps(dic)
with open("q.json","w")as f:
f.write(q)