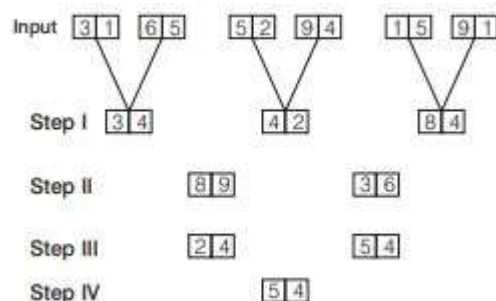## INPUT OUTPUT CLASS SHEET

DIRECTIONS ~ (Q.Nos. 1-5) Study the following information to answer the following questions. A number arrangement machine, when given an input line of numbers, rearranges them following a particular rule in each step. The following is the illustration of the input and the steps of arrangement.

Input	'13	25	9	17	15	32	7	20'
Step I	8	20	4	12	10	27	2	15
Step II	22	34	18	26	24	41	16	29
Step III	121	529	49	225	69	900	25	324
Step IV	169	625	81	289	225	1024	49	400
Step V	144	576	64	256	196	961	36	361
Step VI	676	2500	324	1156	900	4096	196	1600

1. What will be the fourth step of the following input? Input '8 18 28 38 48 58 68 27'
   (a) 46, 289, 784, 1444, 2304, 3364, 4624, 729
   (b) 64, 324, 784, 1444, 2304, 3364, 4624, 729
   (c) 64, 324, 648, 1444, 2304, 3364, 4624, 729
   (d) 64, 324, 748, 1444, 2304, 3364, 4624, 729
   (e) None of the above

2. The sixth step for a given input is 1156, 5776, 2304, 324, 1296, 2916, 7056, 576
   What will be the input?
   (a) 15, 36, 22, 7, 16, 25, 40, 10
   (b) 17, 38, 24, 9, 18, 27, 42, 12
   (c) 19, 40, 26, 11, 20, 29, 44, 14
   (d) 21, 42, 28, 13, 22, 31, 46, 16
   (e) None of the above

3. In how many steps, the arrangement given below the following input would be arrived at?
   Input '11, 17, 22, 34, 8, 25, 38, 43'
   Arrangement 100, 256, 441, 1089, 49, 576, 1369, 1764
   (a) 3 steps   (b) 5 steps   (c) 4 steps
   (d) 6 steps (e) None of these

4. The second step of a given input is
   57, 41, 37, 53, 44, 26, 17, 32
   What will be the input?
   (a) 109, 1404, 38, 58, 1928, 32, 829, 925
   (b) 2304, 1024, 784, 1936, 1225, 289, 64, 529
   (c) 4023, 1042, 874, 1936, 1225, 289, 64, 529
   (d) 2304, 1024, 874, 1936, 1225, 289, 64, 529
   (e) None of the above

5. What would be Step VI for the following input?
   8, 12, 16, 24, 6, 15, 2, 13
   (a) 17, 21, 25, 33, 15, 24, 11, 21
   (b) 3, 7, 11, 19, 1, 10, - 3, - 8
   (c) 256, 576, 1024, 2304, 144, 900, 16, 676
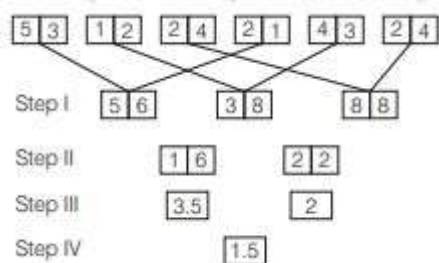   (d) 64, 144, 256, 576, 36, 225, 4, 169
   (e) None of the above

DIRECTIONS ~(Q.Nos. 6-10) Study the given information carefully and answer the questions based on it. An input-output is given in different steps. Some mathematical operations are done in each step. No mathematical operation is repeated in next step but it can be repeated with some other mathematical operation (as multiplication can be used with subtraction in Step I and same can be used with addition in Step II).

As per the rules followed in the steps given above, find out in each of the following questions the appropriate step for the given input

Input 4 1 1 6 2 5 3 8 2 5 7 8

6. Find the multiplication of two numbers obtained in Step II.
   (a) 1409   (b) 1505   (c) 1615
   (d) 1705   (e) None of these

7. Find the addition of the three numbers obtained in Step I.
   (a) 101   (b) 100   (c) 102
   (d) 103   (e) None of these

8. Find the difference between the two numbers obtained in Step III.
   (a) 3   (b) 4   (c) 5
   (d) 6   (e) None of these

9. Find the cube of number which is obtained in Step IV.
   (a) 4096   (b) 3375   (c) 6859
   (d) 5832   (e) None of these

10. If digit is exchanged within the each block, then find the multiplication of two new numbers obtained in Step II.
    (a) 1500   (b) 1812   (c) 1902
    (d) 1802   (e) None of these

DIRECTIONS ~(Q.Nos.11-13) Study the given information carefully and answer the given questions. An input-output is given in different steps. Some mathematical operations are done in each step. No mathematical operation is repeated in next step.

5 3 1 2 2 4 2 1 4 3 2 4

Step I   5 6   3 8   8 8

Step II   1 6   2 2

Step III   3.5   2

Step IV   1.5

As per the rules followed in the steps given above, find out in each of the following questions the appropriate step for the given input.

11. Find the addition of the two numbers obtained in Step III?
(a) 1.5   (b) 3   (c) 7
(d) 3.5   (e) None of these

12. Find the difference between sum of numbers which obtained in 1st step and sum of numbers obtained in all other steps?
(a) 232   (b) 185   (c) 188
(d) 183.5   (e) None of these

13. Find the multiplication of the numbers obtained in Step II?
(a) 426   (b) 462   (c) 188
(d) 98   (e) None of these

DIRECTIONS ~ (Q. Nos. 14-16) Study the following information carefully to answer the given questions.
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule. The following is an illustration of input and rearrangement.

Input	2538	5628	8516	7524	6325	2645
Step I	2358	2568	1568	2457	2356	2456
Step II	1568	2356	2358	2456	2457	2568
Step III	56	35	35	45	45	56
Step IV	11	8	8	9	9	11

Step IV is the last step of the rearrangement. As per the rules followed in the above steps, find out in each of the following questions the appropriate steps for the given input.

Input   3846 9213 8273 7341 5218 3285 6925 4758

14. What will be the addition of the numbers which is second, fourth, sixth and eighth from the left end in Step IV?
(a) 23   (b) 83   (c) 39
(d) 38   (e) 32

15. Which of the following would be the difference of the numbers which is second from left end in Step I and fourth from right end in Step II?
(a) 1138   (b) 1287   (c) 1040
(d) 2125   (e) 1139

16 Which of the following element will be third to the left of seventh from the left end in Step III?
(a) 35   (b) 37   (c) 25
(d) 34   (e) None of these

DIRECTIONS ~(Q.Nos. 17-21) Study the following informations to answer the given questions. A number arrangement machine when given an input line of numbers, rearranges them following a particular rule in each step. The following is an illustration of input and steps of arrangement

Input	23	132	38	27	430	287
Step I	2	13	3	2	43	28
Step II	3	32	8	7	30	87
Step III	32	231	83	72	034	782
Step IV	3	2	4	3	5	3
Step V	34	233	49	38	531	388

17 What will be Step V for the following input?
Input '135, 88, 24, 215, 16'
(a) 236, 99, 35, 316, 27   (b) 136, 99, 25, 216, 17
(c) 17, 216, 25, 99, 136   (d) Cannot be determined
(e) None of these

18 If Step II is '16, 9, 22, 416, 25, 67', then find the input.
(a) 18, 11, 24, 418, 27, 69 (b) 11, 18, 24, 418, 27, 69
(c) 69,27, 418, 24, 11, 18 (d) Cannot be determined
(e) None of these

19 What will be the Step III for the following input?
Input '777, 29, 435, 115, 61, 37'
(a) 777, 92, 436, 116, 62, 37
(b) 777, 92, 534, 16, 511, 73
(c) 777, 92, 534, 511, 16, 73
(d) Cannot be determined
(e) None of these

20 If Step I of an input is '4, 16, 121, 8, 17', then find the input.
(a) 45, 163, 1217, 87, 178
(b) 46, 163, 1213, 85, 172
(c) 41, 161, 1216, 82, 176,
(d) Cannot be determined
(e) None of these

21 What will be Step IV for the following input?
220, 197, 15, 37, 89, 75
(a) 3, 2, 2, 4, 9, 8
(b) 1, 8, 6, 8, 10, 6
(c) 6, 10, 8, 6, 8, 1
(d) 8, 9, 4, 2, 2, 3
(e) None of these