Machine Input – Output

Exercise 1

Directions (1-6): A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: go now 52 38 17 for again 65

Step I: 65 go now 52 38 17 for again

Step II: 65 again go now 52 38 17 for

Step III: 65 again 52 go now 38 17 for

Step IV: 65 again 52 for go now 38 17

Step V: 65 again 52 for 3 8 go now 17

Step VI: 65 again 52 for 38 go 17 now

Step VI 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 step for the given input.

Model 1: Number of Steps for Re-arrangement

1. Input: home turf 39 24 86 44 roll over

   How many steps will be required to complete the arrangement?

   1) 4 2) 5 3) 5 4) 6 5) None of these

2. Input: show 51 36 new far 81 46 goal

   Which of the following steps will be the last but one?

   1) VII 2) VIII 3) VI 4) V 5) None of these

3. Step II: 76 ask 12 32 begin over join 42

How many more steps will be required to complete the rearrangement?

1) Four 2) Five 3) Six 4) Three 5) None of these

4. Step IV: 58 box 47 dew 15 21 town pot

Which of the following steps will be the last?

1) VII 2) VI 3) VIII 4) IX 5) None of these

5. Input: buy win task 52 38 43 door 12

What will be step IV for the above input?

1) 52 buy 43 door 38 task 12 win 2) 52 buy 43 door 38 win task 12

3) 52 buy 43 door task win 38 12 4) There will be no Such step

5) None of these

6. Step III: 94 car 86 window shut 52 31 house

What will be the definite input for the above given step III?

1) 94 car window 86 shut 52 31 house 2) 80 window 94 car shut 52 31 house

3) car shut window 86 52 31 house 94 4) Cannot be determined

5) None of these

Exercise 2

Directions (7-12): A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input rearrangement.

Input: but 32 71 glory fair south 65 84
Step I: south but 32 71 glory fair 65 84
Step II: south 84 but 32 71 glory fair 65
Step III: south 84 glory but 32 71 fair 65
Step IV: south 84 glory 71 but 32 fair 65
Step V: south 84 glory 71 fair but 32 65
Step VI: south 84 glory 71 fair 65 but 32

Step VI 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 step for the given input.

7. Step III: Year 92 ultra 15 23 strive house 39
   How many more steps will be required to complete the rearrangement?
   1) Three 2) Four 3) Two 4) Five 5) None of these

8. Input: any hen 49 24 far wide 34 69
   Which of the following steps will be the last but one?
   1) VI 2) VII 3) V 4) VIII 5) None of these

9. Step II: Town 74 pair 15 31 nice job 42
   Which of the following is definitely the input?
   1) pair 15 31 town nice job 42 74 2) pair 15 town 31 74 nice job 42
   3) pair 15 town 74 31 nice job 42 4) cannot be determined
   5) None of these

10. Input: play over 49 37 12 match now 81

    Which of the following will be step IV?

    1) play 81 over 49 37 match now 12 2) play 81 over 49 37 12 now match

    3) play 81 over 49 now 37 match 12 4) There will be no such step

    5) None of these

11. Step II: war 58 box cart 33 49 star 24

    Which of the following steps will be the last?

    1) V 2) VI 3) IV 4) VII 5) None of these

12. Input: shower fall water 34 51 67 98 goal

    How many steps will be required to complete the rearrangement?

    1) Three 2) Four 3) Six 4) Five 5) None of these

Exercise 3

Directions (13-18): Study the following information carefully and 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 in each step. The following is an illustration of input and rearrangement.

Input: shop 17 table 20 53 oven desk 39

Step I: 17 shop table 20 53 oven desk 39

Step II: 17 table shop 20 53 oven desk 39

Step III: 17 table 20 shop 53 oven desk 39

Step IV: 17 table 20 shop 39 53 oven desk

Step V: 17 table 20 shop 39 oven 53 desk

Step V 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 step for the given input.

13. Input: 89 bind 32 goal house 61 12 joy

    How many steps will be required to complete the arrangement?

    1) Four 2) Five 3) Six 4) Seven 5) None of these

14. Step II: 15 yes 62 51 48 talk now gone

    Which of the following will be step VI?

    1) 15 yes 48 talk 51 now gone 62 2) 15 yes 48 talk 51 62 now gone

    3) 15 yes 48 talk 5I now 62 gone 4) There will be no such step.

    5) None of these

15. Step III: 21 victory 30 joint 64 47 all gone

    How many more steps will be required to complete the rearrangement?

    1) Three 2) Four 3) Five 4) Six 5) None of these

16. Input: win 92 task 73 59 house range 34

    Which of the following will be step IV of the above input?

    1) 34 win 59 task 73 range 92 house 2) 34 win 92 59 task 73 house range

    3) 34 win 92 task 73 59 house range 4) There will be no such step

    5) None of these

17. Input: save 21 43 78 them early 36 for

    Which of the following steps will be the last but one?

    1) VI 2) VII 3) VIII 4) V 5) None of these

18. Input: desire 59 63 all few 38 46 zone

How many steps will be required to complete the rearrangement?

1) Four 2) Five 3) Six 4) Seven 5) None of these

Exercise 4

Directions (19-25): Study the following information carefully to answer the questions given below.

A number sorting machine when given an input of numbers, rearranges the numbers in a particular manner step by step as indicated below till all the numbers are arranged in a particular order.

Input:	39	121	48	18	76	112	14	45	63	96
Step I:	14	39	121	48	18	76	112	45	63	96
Step II:	14	39	48	18	76	112	45	63	96	121
Step III:	14	18	39	48	76	112	45	63	96	121
Step IV:	14	18	39	48	76	45	63	96	112	121
Step V:	14	18	39	45	48	76	63	96	112	121
Step VI:	14	18	39	45	48	63	76	96	112	121

19. Step V: 17 32 43 82 69 93 49 56 99 106

What will be the third step if the above given is fifth step of an input?

1) 17 32 43 82 69 93 49 56 99 106 2) 17 32 82 69 43 93 49 56 99 106

3) 17 32 82 69 93 43 49 56 99 106 4) 17 32 82 69 43 93 56 49 99 106

5) Cannot be determined

20. Input: 101 85 66 49 73 39 142 25 115 74

How many steps will be required for getting the final output for the given input?

1) 5 2) 6 3) 7 4) 8 5) None of these

21. Input: 45 78 97 132 28 16 146 54 99 112

    Which of the following will be the third step for the given input?

    1) 16 28 45 78 97 146 54 99 112 132 2) 16 28 45 97 78 54 99 112 132 146

    3) 16 28 45 78 97 132 54 99 112 146 4) 16 28 45 97 78 132 99 54 112 146

    5) None of these

22. Step II: 22 49 32 88 69 132 101 185

    If the second step for an input is as given above, what will be the fifth step for the same input?

    1) 22 32 49 88 69 101 132 185 2) 22 32 69 49 88 101 132 185

    3) 22 32 49 69 101 88 132 185 4) 22 32 49 88 69 132 101 185

    5) None of these

23. Input: 47 62 17 92 86 42 24 79

    What will be the Step II for the given input?

    1) 17 24 47 62 86 42 79 92 2) 17 47 62 86 42 24 79 92

    3) 17 24 47 62 92 86 42 79 4) 17 47 62 86 24 42 79 92

    5) None of these

24. Input: 138 63 49 93 89 122 32 71

    What will be the last step for the given input?

    1) 32 49 71 63 89 93 122 138 2) 32 49 63 71 93 89 122 138

    3) 32 49 63 71 89 93 122 138 4) Cannot be determined

    5) None of these

25. Input: 68 182 39 93 129 46 21 58

What will be the step III for the given input?

1) 21 39 68 93 129 46 58 182 2) 21 39 68 129 93 46 58 182

3) 32 68 39 93 129 46 58 182 4) Data inadequate

5) None of these

Answers

1 - 4	2 - 3	3 - 1	4 - 2	5 - 2
6 - 4	7 - 2	8 - 3	9 - 4	10 - 4
11 - 2	12 - 4	13 - 3	14 - 3	15 - 5
16 - 5	17 - 5	18 - 2	19 - 5	20 - 4
21 - 3	22 - 5	23 - 2	24 - 3	25 - 1

Note: The date and time mentioned against some questions refer to the doubts clarification session on Reasoning Ability in which the question was solved.

Additional Examples

Model 2: Complex Rearrangement

Directions (1-5): Study the given information and answer the following questions When a word and number arrangement machine is given an input line of words and numbers, it arranges them following a particular rule. The following is an illustration of input and rearrangement (All the numbers are two digit numbers)

Input: 40 made butter 23 37 cookies salt extra 52 86 92 fell now 19

Step I: butter 19 40 made 23 37 cookies salt extra 52 86 92 fell now

Step II: cookies 23 butter 19 40 made 37 salt extra 52 86 92 fell now

Step III: extra 37 cookies 23 butter 19 40 made salt 52 86 92 fell now

Step IV: fell 40 extra 37 cookies 23 butter 19 made salt 52 86 92 now

Step V: made 52 fell 40 extra 37 cookies 23 butter 19 salt 86 92 now

Step VI: now 86 made 52 fell 40 extra 37 cookies 23 better 19 salt 92

Step VII: salt 92 now 86 made 52 fell 40 extra 37 cookies 23 butter 19

Step VII is the last step of the above arrangement as the intended arrangement is obtained.

As per the rules followed in the given steps, find out the appropriate steps for the given input.

Input: 32 proud girl beautiful 48 55 97 rich family 61 72 17 nice life

1. How many steps will be required to complete the given input?

   1) Five 2) Six 3) Seven 4) Eight 5) Nine

2. Which of the following is the third element from the left end of step VI?

   1) beautiful 2) life 3) 61 4) nice 5) 17

3. Which of the following is step III of the given input?

   1) proud 72 girl 48 family 32 beautiful 17 55 97 rich 61 nice life

   2) life 55 girl 48 family 32 beautiful 17 proud 97 rich 61 72 nice

   3) girl 48 family 32 beautiful 17 proud 55 97 rich 61 72 nice life

   4) Family 32 beautiful 17 proud girl 48 55 97 rich 61 72 nice life

   5) girl 48 life 55 family 32 beautiful 17 proud 97 rich 61 72 nice

4. What is the position of “nice” from the left end in the final step?

   1) Fifth 2) Sixth 3) Seventh 4) Eight 5) Ninth

5. Which of the element is third to the right of family in Step V?

   1) Beautiful 2) 17 3) proud 4) 97 5)32

Directions (6-12): Study the following information carefully and answer the questions given below:

A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and various steps of rearrangement. (All the numbers are two digit numbers).

Input: Sweet 46 nice 36 friend 26 help 96 bright 76 kind 66
Step I: Sweet 46 nice 36 friend 26 help bright 76 kind 66 96
Step II: Sweet nice 46 36 friend 26 help bright kind 66 76 96
Step III: Sweet nice kind 46 36 friend 26 help bright 66 76 96
Step IV: Sweet nice kind help 36 friend 26 bright 46 66 76 96
Step V: Sweet nice kind help friend 26 bright 36 46 66 76 96
Step VI: Sweet nice kind help friend bright 26 36 46 66 76 96
And Step VI is the last step of the rearrangement as the desired arrangement is obtained. As per rules followed in the above steps, find out in each of the questions the appropriate step for the given input.

Input: arrow 98 paint 58 lamb 38 each 78 great 18 most 48 rent 88

6. Which word/number would be fifth to the sixth element from the right in the Step V?
   1) great 2) arrow 3) lamb 4) 38 5) 48

7. Which of the following represents the position of "58" in the Step IV?
   1) Eighth from left 2) Third from right 3) Ninth form left
   4) Eleventh from left 5) Fifth from right

8. How many elements (words/numbers) are there between "most" and "78" as they appear in the Step VI?
   1) Eight 2) Seven 3) Nine 4) Five 5) Four

9. Which step number is the following output?

   Rent paint most arrow 58 lamb 38 each great 18 48 78 88 98

   1) there is no such step 2) Step II 3) Step V

   4) Step VI 5) Step III

10. Which element (word/number) would be at the eleventh position from the right in the Step III?

    1) lamb 2) arrow 3) 58 4) 38 5) each

11. Which element (word/number) would be at the sixth position from the left in the Step VI?

    1) 18 2) arrow 3) great 4) each 5) 38

12. At which of the following positions "great" would appear from the left in the Step V?

    1) Fifth 2) Sixth 3) Fourth 4) Second 5) Third

Directions (13 – 20): Study the following information carefully and answer the questions given below:

When a word and number arrangement machine is given an input line of words and numbers, it arranges them following a particular rule. The following is an illustration of input and rearrangement: (All the numbers are two digit numbers).

Input: jar eight till 31 68 73 if after 98 16 25 on

Step I: after jar eight till 31 68 73 if 98 25 on 16

Step II: after eight jar till 31 68 73 if 98 on 25 16

Step III: after eight if jar till 68 73 98 on 31 25 16

Step IV: after eight if jar on till 73 98 68 31 25 16

Step V: after eight if jar on till 98 73 68 31 25 16

Step V is the last step of the above arrangement as the intended arrangement is obtained.

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: site grid 19 53 22 call art main 35 66 fill 93

13. Which step number would be the following output?

    Art call fill grid site main 66 93 53 35 22 19

    1) II 2) III 3) V 4) IV 5) None of these

14. What will be the position of 53 in Step VI?

    1) Second from the right end 2) Eighth from the left end

    3) fifth from the right end 4) third from the right end

    5) None of these

15. Which of the following is fourth from the left end of Step III?

    1) 53 2) grid 3) site 4) fill 5) None of these

16. How many steps are needed to complete this arrangement?

    1) V 2) IV 3) VII

    4) Cannot be determined 5) None of theses

17. Which of the following would be the final arrangement of the above input?

    1) art call fill grid main 93 site 66 53 35 22 19

    2) art call grid fill main site 93 66 53 35 22 19

    3) art call fill grid main site 93 66 53 35 22 19

    4) art call fill grid main site 93 66 53 35 19 22

    5) None of these

18. Which of the following would be Step II?
    1) art call site grid 53 main 35 66 fill 93 22 19
    2) art call site grid 53 main 35 66 fill 22 19 93
    3) art call site grid main 53 35 66 fill 93 22 19
    4) art call site grid 53 main 35 fill 66 93 22 19
    5) None of these

19. Which of the following would be second to the right of the seventh from the right end of Step IV?
    1) main 2) 66 3) site 4) grid 5) 93

20. How many elements (words/numbers) are there between fill and 35 as they appear in the Step III?
    1) Seven 2) Six 3) Five 4) Four 5) Eight

Directions (21 – 25): Study the following information 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: 52 peak 91 snow freeze 46 cold 15 high 31 73 trek
Step I: 15 52 peak snow freeze 46 cold high 31 73 trek 91
Step II: 15 31 52 peak snow freeze 46 cold high trek 73 91
Step III: 15 31 46 peak snow freeze cold high trek 52 73 91
Step IV: 15 31 46 cold peak snow freeze high trek 52 73 91
Step V: 15 31 46 cold freeze peak snow high trek 52 73 91
Step VI: 15 31 46 cold freeze high peak snow trek 52 73 91
Step VI 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: 67 hot sun 19 best 83 ice 49 ace 77 cut 37

21. How many steps would be needed to complete the arrangement?

    1) X 2) VIII 3) IX 4) VII 5) None of these

22. Which step number would be the following output?

    19 37 49 ace best hot sun ice cut 67 77 83

    1) II 2) VI 3) V 4) IV 5) None of these

23. Which of the following would be the Step I?

    1) 19 37 49 hot sun best ice ace cut 67 77 83

    2) 83 67 hot sun best ice 49 ace 77 cut 37 19

    3) 19 67 ace best hot sun ice 49 77 cut 37 83

    4) 19 67 hot sun best ice 49 ace 77 cut 37 83

    5) None of these

24. Which of the following would be the final arrangement?

    1) 67 77 83 ace best cut hot ice sun 19 37 49

    2) 19 37 49 ace best cut hot ice sun 67 77 83

    3) 19 37 49 67 77 83 ace best cut hot ice sun

    4) 19 37 49 ace ice best cut hot sun 67 77 83

    5) None of these

25. In Step IV, which of the following word/number would be on 7th (from the right)?

    1) sun 2) best 3) 67 4) cut 5) None of these

Directions (26 – 28): Study the following information 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 in each step. The following is an illustration of input and rearrangement. (All the numbers are two digits numbers and are arranged as per some logic based on the value of the number)

Input: win 56 32 93 bat for 46 him 28 11 give chance

Step I: 93 56 32 bat for 46 him 28 11 give chance win
Step II: 11 93 56 32 bat for 46 28 give chance win him
Step III: 56 11 93 32 bat for 46 28 chance win him give
Step IV: 28 56 11 93 32 bat 46 chance win him give for
Step V: 46 28 56 11 96 32 bat win him give for chance
Step VI: 32 46 28 56 11 93 win him give for chance bat

And step VI is the last Step of the arrangement of the above input as the intended arrangement is obtained.

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: fun 89 at the 26 16 base camp 35 53 here 68

26. Which of the following would be the step II?
    1) 89 fun at 28 16 base camp 35 53 here 68 the
    2) 35 53 28 68 16 89 the here fun camp base at
    3) 16 89 at fun 28 camp base 35 53 68 the here
    4) 53 28 68 16 89 35 the here fun camp base at
    5) None of these

27. Which of the following would be the Step II?

1) base 2) at 3) 35 4) the 5) 53

28. Which step number would be the following output?

1) There will be no such step 2) III 3) II

4) V 5) IV

Directions (29-35): Study the following information carefully and answer the questions given below:

A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and various steps of rearrangement. (All the numbers are two digit numbers).

Input: kit 98 nit 27 32 pit lit 79 17 mit

Step I: 98 nit 27 32 skit 18 pit lit 79 mit

Step II: 98 nit 32 skit slit 28 18 pit 79 mit

Step III: 98 nit skit slit smit 33 28 18 pit 79

Step IV: 98 skit slit smit snit 80 33 28 18 pit

Step V: skit slit smit snit spit 99 80 33 28 18

And Step V is the last step of the rearrangement as the desired arrangement is obtained. As per rules followed in the above steps, find out in each of the questions the appropriate step for the given input.

Input: 52 lap 25 74 rap ram lan 87 an 67

29. How many steps would be required to complete the rearrangement?

1) Eight 2) Six 3) five 4) Nine 5) Cannot be determined

30. How many elements (words /numbers) are there between "clan" and "ram" as they appear in Step III?
    1) Five 2) Six 3) Four 4) Seven 5) Three

31. Which step number is the following output "rap can clan clap cram 75 68 53 26 87"
    1) Step III 2) Step IV 3) Step V 4) Step VI 5) There is no such step

32. Which word/number would be to the immediate right of the fourth element from the right end in Step III?
    1) lap 2) 67 3) 25 4) rap 5) None of these

33. In the penultimate step "can" is related to "cram" and "clan" is related to "75" in a certain way. Then "rap" is related to
    1) 67 2) 87 3) clap 4) can 5) ram

34. At what position "can" would come from the right end in the Step IV?
    1) Ninth 2) Eighth 3) Sixth 4) Seventh 5) Fifth

35. How many words/numbers are there between 53 and 87 in step II?
    1) Two 2) Three 3) One 4) None 5) None of these

Directions (36-39): Study the following information carefully and 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 in each step.

The following is an illustration of input and rearrangement.

Input: Can 9 fine 16 cross 25 prompt 36 problem 49 randomly 64

Step I: 25 Can 9 fine 16 problem 49 randomly 64 prompt

Step II: 16 25 Can 9 randomly 64 prompt problem

Step III: 9 16 25 prompt problem randomly

Step III is the last step of the rearrangement.

Now, a set of words and letters is given below. As per the rules followed in above steps, answer the questions based on it.

36. Input 81 gratitude 49 magnify 100 difficulty 4 hi 16 onus 64 practice

    Which of the following is the step III?

    1) gratitude 49 magnify 100 difficulty 16 onus 64

    2) 81 gratitude 49 100 difficulty onus 64 practice

    3) gratitude 49 100 difficulty onus 64

    4) gratitude magnify difficulty 4 16 64

    5) None of these

37. Which is the second element to the right of the fourth element from left in the penultimate step of the above input?

    1) practice 2) gratitude 3) 4 4) magnify 5) None of these

38. Input 121 superfluous 36 freeze sound 25 4 hi

    Which step will be the last for the given input?

    1) III 2) II 3) IV 4) I 5) None of these

39. Which of the following can be the input for the given Step?

    STEP III - 49 practice is the only method

    1) is believe 49 64 only 16 method 36 the none 9

    2) practice is 49 believe only method 49 64 81

    3) believe 49 64 practice 4 is the 9 only 16 method 36

    4) 99 care for 16 25 cross limit practice 49 the only method

    5) cannot be determined

Answers

1 – 3	2 - 4	3 - 3	4 - 1	5 - 2	6 - 3	7 - 4	8 - 1	9 - 5	10 - 2
11 - 4	12 - 1	13 - 4	14 - 5	15 - 3	16 - 1	17 - 3	18 - 1	19 - 5	20 - 2
21 - 4	22 - 3	23 - 4	24 - 2	25 - 1	26 - 5	27 - 3	28 - 4	29 - 3	30 - 3
31 - 2	32 - 5	33 - 3	34 - 1	35 - 5	36 - 4	37 - 5	38 - 2	39 - 3	