Reasoning

Input Output

Level-2

Q1 Directions:An arrangement of the numbers given in the machine when given an input of numbers rearranges them following a particular rule in each step. The following is an illustration of input and steps of rearrangement.

Input: 256783 935421 174682 673542 525679 427513
Step-I: 347692 824530 065793 762453 434768 536402
Step-II: 173846 412265 21931 254151 217384 268201
Step-III: 64542 31041 1862 31344 16454 42621
Step-IV: 2112 4145 724 2210 5211 6883
Step-V: 4 80 56 0 10 1152
Step-VI: 4 8 2 0 1 1
Based on the concept given above find the output of the following input
Input: 276922 589764 812426 356427 954831 725369

'10450 50403 31062 11412 20736 26626' represents which step of the given input ?
(A) Step-I (B) Step-II
(C) Step-III (D) Step-IV
(E) None of these

Q2 Read the following information and give your answer carefully.

Input : 865437 315489 468713 236548 564981 675482
Step I - 315437 865489 236713 468548 675981 564482
Step II- 315337 755379 135713 357537 575971 553371
Step III- 153137 157579 351313 353537 455771 95571
Step IV- 113357 155779 113335 333557 145577 15579
Step V- 16 14 12 26 19 7
Step V is last step.
Following the same pattern, solve for the given input:

Input : 324567 123458 613484 346821 346822 643786
Find odd one out?
(A) 17 (B) 18
(C) 20 (D) 3
(E) 5

Q3 Read the following information and give your answer carefully.

Input : 865437 315489 468713 236548 564981 675482
Step I - 315437 865489 236713 468548 675981 564482
Step II- 315337 755379 135713 357537 575971 553371
Step III- 153137 157579 351313 353537 455771 95571
Step IV- 113357 155779 113335 333557 145577 15579

Step V- 16 14 12 26 19 7
Step V is last step.
Following the same pattern, solve for the given input:

Input : 324567 123458 613484 346821 346822 643786
How many numbers is between 2nd from left end and 1st from right end in step 3rd?
(A) 1 (B) 2
(C) 3 (D) 4
(E) None of these

Q4 Read the following information and give your answer carefully.

Input- 865437 315489 468713 236548 564981 675482
Step I - 315437 865489 236713 468548 675981 564482
Step II- 315337 755379 135713 357537 575971 553371
Step III- 153137 157579 351313 353537 455771 95571
Step IV- 113357 155779 113335 333557 145577 15579
Step V- 16 14 12 26 19 7
Step V is last step.
Following the same pattern, solve for the given input:-

Input- 324567 123458 613484 346821 346822 643786
What is product of 1st and 2nd number from left in last step?
(A) 90 (B) 85
(C) 92 (D) 304
(E) 524

Q5

Read the following information and give your answer carefully.
Input : 865437 315489 468713 236548 564981 675482
Step I - 315437 865489 236713 468548 675981 564482
Step II- 315337 755379 135713 357537 575971 553371
Step III- 153137 157579 351313 353537 455771 95571
Step IV- 113357 155779 113335 333557 145577 15579
Step V- 16 14 12 26 19 7
Step V is last step.
Following the same pattern, solve for the given input:
Input : 324567 123458 613484 346821 346822 643786
Which number is 2nd from left end in step-3rd?
(A) 151257 (B) 093157
(C) 153373 (D) 155733
(E) 153365

Q6 Read the following information and give your answer carefully.

Input : 865437 315489 468713 236548 564981 675482
Step I - 315437 865489 236713 468548 675981 564482
Step II- 315337 755379 135713 357537 575971 553371
Step III- 153137 157579 351313 353537 455771 95571
Step IV- 113357 155779 113335 333557 145577 15579
Step V- 16 14 12 26 19 7
Step V is last step.

Following the same pattern, solve for the given input:

Input : 324567 123458 613484 346821 346822 643786

Which number is 3rd from right end in last step?

(A) 20 (B) 3
(C) 6 (D) 26
(E) 17

Q7 Read the following information and give your answer carefully.

Input : 865437 315489 468713 236548 564981 675482

Step I - 315437 865489 236713 468548 675981 564482

Step II- 315337 755379 135713 357537 575971 553371

Step III- 153137 157579 351313 353537 455771 95571

Step IV- 113357 155779 113335 333557 145577 15579

Step V- 16 14 12 26 19 7

Step V is last step.

Following the same pattern, solve for the given input:

Input : 324567 123458 613484 346821 346822 643786

Which number is 4th from left end in 4th step?

(A) 112557 (B) 113557
(C) 111125 (D) 111225
(E) 333557

Q8 Directions: Study the following data carefully and answer the questions accordingly.

Input:- 25 76 18 95 65 47 69 93 29 33

Step 1- 95 25 76 18 65 47 69 93 29 33

Step 2- 95 25 76 18 65 47 69 29 33 93

Step 3- 76 95 25 18 65 47 69 29 33 93

Step 4- 76 95 25 18 65 47 29 33 93 69

Step 5- 24 4 18 7 19

Step 6- 24 19 18 7 4

Step 7- 31 26 25 14 11

Step 7 is the last step as per the rules answer the following questions for the given input

Input:- 77 23 15 97 67 44 65 94 30 36

How many number are between 34 and 1 in step 7 ?

(A) 1 (B) 3
(C) 2 (D) 4
(E) None of these

Q9 Directions: Study the following data carefully and answer the questions accordingly.

Input:- 25 76 18 95 65 47 69 93 29 33

Step 1- 95 25 76 18 65 47 69 93 29 33

Step 2- 95 25 76 18 65 47 69 29 33 93

Step 3- 76 95 25 18 65 47 69 29 33 93

Step 4- 76 95 25 18 65 47 29 33 93 69

Step 5- 24 4 18 7 19

Step 6- 24 19 18 7 4

Step 7- 31 26 25 14 11

Step 7 is the last step as per the rules answer the following questions for the given input

Input:- 77 23 15 97 67 44 65 94 30 36

What is the difference between the number which is third from the left end in step 2 and 2nd from the right end in step 3?

(A) 14 (B) 13
(C) 16 (D) 17
(E) None of these

Q10 Directions: Study the following data carefully and answer the questions accordingly.

Input:- 25 76 18 95 65 47 69 93 29 33

Step 1- 95 25 76 18 65 47 69 93 29 33

Step 2- 95 25 76 18 65 47 69 29 33 93

Step 3- 76 95 25 18 65 47 69 29 33 93

Step 4- 76 95 25 18 65 47 29 33 93 69
Step 5- 24 4 18 7 19
Step 6- 24 19 18 7 4
Step 7- 31 26 25 14 11
Step 7 is the last step as per the rules answer the following questions for the given input
Input:- 77 23 15 97 67 44 65 94 30 36
What is the sum of Step 6 and Step 7?
(A) 199 (B) 200
(C) 205 (D) 217
(E) 198

Q11 Study the following information carefully and answer the questions accordingly.

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 rearrangement.
Input: 472 219 437 573 413 616
Step I: 247 129 347 357 134 166
Step II: 26 24 28 30 16 26
Step III: 64 08 216 27 125 64
Step IV: 183 121 131 330 9 102
Step V: 24 02 03 00 9 00
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 steps for the given input. Input for the questions.
Input: 532 173 526 371 287 834

In which of the following steps of the given Input is '192 137 277 321' found in the same order?
(A) Step I (B) Step IV
(C) Step III (D) Step V
(E) None of these

Q12

Study the following information carefully and answer the questions accordingly.

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 rearrangement.
Input: 472 219 437 573 413 616
Step I: 247 129 347 357 134 166
Step II: 26 24 28 30 16 26
Step III: 64 08 216 27 125 64
Step IV: 183 121 131 330 9 102
Step V: 24 02 03 00 9 00
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 steps for the given input. Input for the questions.
Input: 532 173 526 371 287 834

What will be the addition of the numbers which are 3rd from the right end in step II and 4th from the left end in step IV?
(A) 129 (B) 159
(C) 176 (D) 124
(E) 170

Q13 Study the following information carefully and answer the questions accordingly.

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 rearrangement.
Input: 472 219 437 573 413 616
Step I: 247 129 347 357 134 166
Step II: 26 24 28 30 16 26
Step III: 64 08 216 27 125 64
Step IV: 183 121 131 330 9 102

Step V: 24 02 03 00 9 00
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 steps for the given input. Input for the questions.
Input: 532 173 526 371 287 834

What will be the difference of the numbers which is 3rd from the right end in step IV and 2nd from the left end in step V?
(A) 150 (B) 220
(C) 130 (D) 116
(E) None of these

Q14 Study the following information carefully and answer the questions accordingly.

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 rearrangement.
Input: 472 219 437 573 413 616
Step I: 247 129 347 357 134 166
Step II: 26 24 28 30 16 26
Step III: 64 08 216 27 125 64
Step IV: 183 121 131 330 9 102
Step V: 24 02 03 00 9 00
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 steps for the given input. Input for the questions.
Input: 532 173 526 371 287 834

What will be the product of the numbers which are third from the right end in step II and second from the right end in step V?
(A) 3025 (B) 2799
(C) 2156 (D) 5256
(E) 6444

Q15 Study the following information carefully and answer the questions accordingly.

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 rearrangement.
Input: 472 219 437 573 413 616
Step I: 247 129 347 357 134 166
Step II: 26 24 28 30 16 26
Step III: 64 08 216 27 125 64
Step IV: 183 121 131 330 9 102
Step V: 24 02 03 00 9 00
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 steps for the given input. Input for the questions.
Input: 532 173 526 371 287 834

Which of the following elements will be 2nd to the left of 4th from the right end in step III?
(A) 08 (B) 64
(C) 27 (D) None of these
(E) 125

Q16 Directions: A word & number arrangement machine when given an input line of words & numbers rearranges them following a particular rule in each step. The following is an illustration of an input & its rearrangement.
Input : 050723 031725 011524 011726 021720
Step 1 : EGW CQY AOX AQZ BQT
Step 2 : GWE QYC OXA QZA QTB
Step 3 : TDE JBC LCA JAA JGB
Step 4 : 2045 1023 1231 1011 1072
Step 5 : 29 15 34 12 19

Step 5 is the last step of the rearrangements, Based on the following logic rearrange the given input.

Input : 020524 020326 031623 061725 010224

In step 4, which of the following word/number would be at 2nd position to the left end?

(A) 2412 (B) 2232

(C) 1143 (D) 1026

(E) None of these

Q17 **Directions: A word & number arrangement machine when given an input line of words & numbers rearranges them following a particular rule in each step. The following is an illustration of an input & its rearrangement.**

Input : 050723 031725 011524 011726 021720

Step 1 : EGW CQY AOX AQZ BQT

Step 2 : GWE QYC OXA QZA QTB

Step 3 : TDE JBC LCA JAA JGB

Step 4 : 2045 1023 1231 1011 1072

Step 5 : 29 15 34 12 19

Step 5 is the last step of the rearrangements, Based on the following logic rearrange the given input.

Input : 020524 020326 031623 061725 010224

In which step the elements 'CZB PWC' are found in the same order?

(A) Step 1 (B) Step 2

(C) Step 3 (D) Step 4

(E) None of these

Q18 **Directions: A word & number arrangement machine when given an input line of words & numbers rearranges them following a particular rule in each step. The following is an illustration of an input & its rearrangement.**

Input : 050723 031725 011524 011726 021720

Step 1 : EGW CQY AOX AQZ BQT

Step 2 : GWE QYC OXA QZA QTB

Step 3 : TDE JBC LCA JAA JGB

Step 4 : 2045 1023 1231 1011 1072

Step 5 : 29 15 34 12 19

Step 5 is the last step of the rearrangements, Based on the following logic rearrange the given input.

Input : 020524 020326 031623 061725 010224

What is the sum of all the even numbers in Step 5 ?

(A) 92 (B) 90

(C) 82 (D) 80

(E) None of these

Answer Key

Q1	(C)
Q2	(B)
Q3	(C)
Q4	(B)
Q5	(B)
Q6	(B)
Q7	(C)
Q8	(C)
Q9	(B)
Q10	(A)
Q11	(B)
Q12	(B)
Q13	(D)
Q14	(C)
Q15	(A)
Q16	(A)
Q17	(B)
Q18	(A)

Hints & Solutions

Q1 Text Solution:

The given Input is:

Input: 256783 935421 174682 673542 525679 427513

Step-I: In this step, all the odd digits of the numbers are subtracted by 1 and all the even numbers are added by 1. Therefore, the output of Step-I is given by

347692 824530 065793 762453 434768 536402

Step-II: In this step, the odd numbers are divided by 3 and even numbers are divided by 2. Therefore, the output is given by

173846 412265 21931 254151 217384 268201

Step-III: In this step, each digit of the number is subtracted with its succeeding digit. Therefore, the output is given by

64542 31041 1862 31344 16454 42621

Step-IV: In this step, each digit of odd number is added with its succeeding digit and each digit of even number is subtracted from its succeeding digit. Therefore, the output is given by

2112 4145 724 2210 5211 6883

Step-V: In this step, each digit of the number is multiplied with each other. The output is given by

4 80 56 0 10 1152

Step-VI: In this step, each number is turned into a single digit by considering the 1st digit only.. Therefore, the output is given by

4 8 2 0 1 1

Now, from the concept followed above, the output of the new input is given by

Input: 276922 589764 812426 356427 954831 725369

Step-I: 367833 498675 903537 247536 845920 634278

Step-II: 122611 166225 301179 123768 422960 317139

Step-III: 10450 50403 31062 11412 20736 26626

Step-IV: 1415 5443 2164 0331 2743 4044

Step-V: 20 240 48 0 168 0

Step-VI: 2 2 4 0 1 0

This is the final output.

Q2 Text Solution:

Step I- First 3 digit interchanged with pair of 2 number.

(E.g. 865437 315489

315437 865489)

Step II- Even digit – 1 of each number (E.g. 315437 = 4-1=3 = 315337

Step III- Multiply of middle digit of each number and placed in 1st.

(E.g. 315337= 5*3 = 15 = 153137)

Step IV- Digit increasing order of each number.

Step V- Addition of prime digit- addition of non-prime digit. (E.g. 113357 = 1+1=2, 3+3+5+7 = 18 = 18-2 =16

Input- 324567 123458 613484 346821 346822 643786

Step-I 123567 324458 346484 613821 643822 346786

Step-II 123557 313357 335373 513711 533711 335775

Step-III 151257 093157 153373 215111 215311 353375

Step-IV 112557 013579 133357 111125 111235 333557

Step-V 17 5 20 3 7 26

Q3 Text Solution:

Step I- First 3 digit interchanged with pair of 2 number.

(E.g. 865437 315489

315437 865489)

Step II- Even digit – 1 of each number (E.g. 315437 = 4-1=3 = 315337

Step III- Multiply of middle digit of each number and placed in 1st.

(E.g. 315337= 5*3 = 15 = 153137)

Step IV- Digit increasing order of each number.

Step V- Addition of prime digit- addition of non-prime digit. (E.g. 113357 = 1+1=2, 3+3+5+7 = 18 = 18-2 =16

Input- 324567 123458 613484 346821 346822 643786

Step-I 123567 324458 346484 613821 643822 346786

Step-II 123557 313357 335373 513711 533711 335775

Step-III 151257 093157 153373 215111 215311 353375

Step-IV 112557 013579 133357 111125 111235 333557

Step-V 17 5 20 3 7 26

Q4 Text Solution:

Step I- First 3 digit interchanged with pair of 2 number.

(E.g. 865437 315489

315437 865489)

Step II- Even digit – 1 of each number (E.g. 315437 = 4-1=3 = 315337

Step III- Multiply of middle digit of each number and placed in 1st.

(E.g. 315337= 5*3 = 15 = 153137)

Step IV- Digit increasing order of each number.

Step V- Addition of prime digit- addition of non-prime digit. (E.g. 113357 = 1+1=2, 3+3+5+7 = 18 = 18-2 =16

Input- 324567 123458 613484 346821 346822 643786

Step-I 123567 324458 346484 613821 643822 346786

Step-II 123557 313357 335373 513711 533711 335775

Step-III 151257 093157 153373 215111 215311 353375

Step-IV 112557 013579 133357 111125 111235 333557

Step-V 17 5 20 3 7 26

Q5 Text Solution:

Step I- First 3 digit interchanged with pair of 2 number.

(E.g. 865437 315489 315437 865489)

Step II- Even digit – 1 of each number (E.g. 315437 = 4-1=3 = 315337)

Step III- Multiply of middle digit of each number and placed in 1st.

(E.g. 315337= 5*3 = 15 = 153137)

Step IV- Digit increasing order of each number.

Step V- Addition of prime digit- addition of non-prime digit. (E.g. 113357 = 1+1=2, 3+3+5+7 = 18 = 18-2 =16

Input- 324567 123458 613484 346821 346822 643786

Step-I 123567 324458 346484 613821 643822 346786

Step-II 123557 313357 335373 513711 533711 335775

Step-III 151257 **093157** 153373 215111 215311 353375

Step-IV 112557 013579 133357 111125 111235 333557

Step-V 17 5 20 3 7 26

- **093157 is 2nd from left end in step-3rd.**

Hence, 093157 is the correct answer.

Q6 Text Solution:

Step I- First 3 digit interchanged with pair of 2 number.

(E.g. 865437 315489

315437 865489)

Step II- Even digit – 1 of each number (E.g. 315437 = 4-1=3 = 315337

Step III- Multiply of middle digit of each number and placed in 1st.

(E.g. 315337= 5*3 = 15 = 153137)

Step IV- Digit increasing order of each number.

Step V- Addition of prime digit- addition of non-prime digit. (E.g. 113357 = 1+1=2, 3+3+5+7 = 18 = 18-2 =16

Input- 324567 123458 613484 346821 346822 643786

Step-I 123567 324458 346484 613821 643822 346786

Step-II 123557 313357 335373 513711 533711 335775

Step-III 151257 093157 153373 215111 215311 353375

Step-IV 112557 013579 133357 111125 111235 333557

Step-V 17 5 20 3 7 26

Q7 Text Solution:

Step I- First 3 digit interchanged with pair of 2 number.

(E.g. 865437 315489

315437 865489)

Step II- Even digit – 1 of each number (E.g. 315437 = 4-1=3 = 315337

Step III- Multiply of middle digit of each number and placed in 1st.

(E.g. 315337= 5*3 = 15 = 153137)

Step IV- Digit increasing order of each number.

Step V- Addition of prime digit- addition of non-prime digit. (E.g. 113357 = 1+1=2, 3+3+5+7 = 18 = 18-2 =16

Input- 324567 123458 613484 346821 346822 643786

Step-I 123567 324458 346484 613821 643822 346786

Step-II 123557 313357 335373 513711 533711 335775

Step-III 151257 093157 153373 215111 215311 353375

Step-IV 112557 013579 133357 111125 111235 333557

Step-V 17 5 20 3 7 26

Q8 Text Solution:

Step 1- The largest number is moved to the left end

Step 2- The second largest number is moved to the right end.

Step 3- The third largest number is moved to the left end.

Step 4- The fourth largest number is moved to the right end.

Step 5 Make the pairs from right and Take the difference and place it starting from the left end

Step 6- Arrange the numbers in increasing order from the right end.

Step 7- 7 is added in all the numbers

So For the given input is

Input:- 77 23 15 97 67 44 65 94 30 36

Step 1- 97 77 23 15 67 44 65 94 30 36

Step 2- 97 77 23 15 67 44 65 30 36 94

Step 3- 77 97 23 15 67 44 65 30 36 94

Step 4- 77 97 23 15 44 65 30 36 94 67

Step 5- 27 6 21 8 20

Step 6- 27 21 20 8 6

Step 7- 34 27 27 15 13

Step 7 is the last step.

Q9 Text Solution:

Step 1- The largest number is moved to the left end

Step 2- The second largest number is moved to the right end.

Step 3- The third largest number is moved to the left end.

Step 4- The fourth largest number is moved to the right end.
Step 5 Make the pairs from right and Take the difference and place it starting from the left end
Step 6- Arrange the numbers in increasing order from the right end.
Step 7- 7 is added in all the numbers
So For the given input is
Input:- 77 23 15 97 67 44 65 94 30 36
Step 1- 97 77 23 15 67 44 65 94 30 36
Step 2- 97 77 23 15 67 44 65 30 36 94
Step 3- 77 97 23 15 67 44 65 30 36 94
Step 4- 77 97 23 15 44 65 30 36 94 67
Step 5- 27 6 21 8 20
Step 6- 27 21 20 8 6
Step 7- 34 27 27 15 13
Step 7 is the last step.

Q10 **Text Solution:**
Step 1- The largest number is moved to the left end
Step 2- The second largest number is moved to the right end.
Step 3- The third largest number is moved to the left end.
Step 4- The fourth largest number is moved to the right end.
Step 5 Make the pairs from right and Take the difference and place it starting from the left end
Step 6- Arrange the numbers in increasing order from the right end.
Step 7- 7 is added in all the numbers
So For the given input is
Input:- 77 23 15 97 67 44 65 94 30 36
Step 1- 97 77 23 15 67 44 65 94 30 36
Step 2- 97 77 23 15 67 44 65 30 36 94
Step 3- 77 97 23 15 67 44 65 30 36 94
Step 4- 77 97 23 15 44 65 30 36 94 67
Step 5- 27 6 21 8 20
Step 6- 27 21 20 8 6
Step 7- 34 27 27 15 13
Step 7 is the last step.

Q11 **Text Solution:**
In the given machine arrangement,
In Step I:- The digits are arranged in ascending order within the numbers.
In step II:- The sum of the digits is multiplied by 2.
In step III:- The cube of the difference between the digits within the number is taken.
In step IV:- Step III is subtracted from step I.
In step V:- The product of the digits within the number appeared in step IV is taken.
Input: 532 173 526 371 287 834
Step I: 235 137 256 137 278 348
Step II: 20 22 26 22 34 30
Step III: 08 00 64 00 01 27
Step IV: 227 137 192 137 277 321
Step V: 28 21 18 21 98 06
According to the common solution, we can say that In Step IV of the given Input is '192 137 277 321' found in the same order.
Thus, the correct answer is option B.

Q12 **Text Solution:**
In the given machine arrangement,
In Step I:- The digits are arranged in ascending order within the numbers.
In step II:- The sum of the digits is multiplied by 2.
In step III:- The cube of the difference between the digits within the number is taken.
In step IV:- Step III is subtracted from step I.
In step V:- The product of the digits within the number appeared in step IV is taken.
Input: 532 173 526 371 287 834
Step I: 235 137 256 137 278 348
Step II: 20 22 26 22 34 30
Step III: 08 00 64 00 01 27

Step IV: 227 137 192 137 277 321
Step V: 28 21 18 21 98 06
According to the common solution, we can say that the addition of the numbers which are 3rd from the right end in step II and 4th from the left end in step IV is 159.
Thus, the correct answer is option B.

Q13 Text Solution:
In the given machine arrangement,
In Step I:- The digits are arranged in ascending order within the numbers.
In step II:- The sum of the digits is multiplied by 2.
In step III:- The cube of the difference between the digits within the number is taken.
In step IV:- Step III is subtracted from step I.
In step V:- The product of the digits within the number appeared in step IV is taken.
Input: 532 173 526 371 287 834
Step I: 235 137 256 137 278 348
Step II: 20 22 26 22 34 30
Step III: 08 00 64 00 01 27
Step IV: 227 137 192 137 277 321
Step V: 28 21 18 21 98 06
According to the common solution, we can say that the difference of the numbers which is 3rd from the right end in step IV and 2nd from the left end in step V is 116.
Thus, the correct answer is option D.

Q14 Text Solution:
In the given machine arrangement,
In Step I:- The digits are arranged in ascending order within the numbers.
In step II:- The sum of the digits is multiplied by 2.
In step III:- The cube of the difference between the digits within the number is taken.
In step IV:- Step III is subtracted from step I.
In step V:- The product of the digits within the number appeared in step IV is taken.
Input: 532 173 526 371 287 834
Step I: 235 137 256 137 278 348
Step II: 20 22 26 22 34 30
Step III: 08 00 64 00 01 27
Step IV: 227 137 192 137 277 321
Step V: 28 21 18 21 98 06
According to the common solution, we can say that the product of the numbers which are third from the right end in step II (22) and second from the right end in step V (98) is 2156.
Thus, the correct answer is option C.

Q15 Text Solution:
In the given machine arrangement,
In Step I:- The digits are arranged in ascending order within the numbers.
In step II:- The sum of the digits is multiplied by 2.
In step III:- The cube of the difference between the digits within the number is taken.
In step IV:- Step III is subtracted from step I.
In step V:- The product of the digits within the number appeared in step IV is taken.
Input: 532 173 526 371 287 834
Step I: 235 137 256 137 278 348
Step II: 20 22 26 22 34 30
Step III: 08 00 64 00 01 27
Step IV: 227 137 192 137 277 321
Step V: 28 21 18 21 98 06
According to the common solution, we can say that the 2nd to the left of the 4th from the right end in step III is 08.
Thus, the correct answer is option A.

Q16 Text Solution:
Input : 020524 020326 031623 061725 010224
Numbers are converted into letters , according to place value of letter .

Step 1 : BEX BCZ CPW FQY ABX
Each letter in a word is shifted one left and first shifted to last position.
Step 2 : EXB CZB PWC QYF BXA
Each letter in a word is replaced with word opposite to that and last one is kept same.
Step 3 : VCB XAB KDC JBF YCA
Each word is converted into number according to place value of letter
Step 4 : 2232 2412 1143 1026 2531
Every 4 digit number is converted into 2 digit, buy adding first & second digits and third & fourth digit.
Step 5 : 45 63 27 18 74

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Q17 Text Solution:

Input : 020524 020326 031623 061725 010224
Numbers are converted into letters , according to place value of letter .
Step 1 : BEX BCZ CPW FQY ABX
Each letter in a word is shifted one left and first shifted to last position.
Step 2 : EXB CZB PWC QYF BXA
Each letter in a word is replaced with word opposite to that and last one is kept same.
Step 3 : VCB XAB KDC JBF YCA
Each word is converted into number according to place value of letter
Step 4 : 2232 2412 1143 1026 2531
Every 4 digit number is converted into 2 digit, buy adding first & second digits and third & fourth digit.
Step 5 : 45 63 27 18 74

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Q18 Text Solution:

Input : 020524 020326 031623 061725 010224
Numbers are converted into letters , according to place value of letter .
Step 1 : BEX BCZ CPW FQY ABX
Each letter in a word is shifted one left and first shifted to last position.
Step 2 : EXB CZB PWC QYF BXA
Each letter in a word is replaced with word opposite to that and last one is kept same.
Step 3 : VCB XAB KDC JBF YCA
Each word is converted into number according to place value of letter
Step 4 : 2232 2412 1143 1026 2531
Every 4 digit number is converted into 2 digit, buy adding first & second digits and third & fourth digit.
Step 5 : 45 63 27 18 74

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕	⇕
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14