



## Prime CAT 10 2022 DILR

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### Section-1

## Sec 1

**Directions for questions 1 to 6:** Answer the questions on the basis of the information given below.

In a SINGLES YOGASANA COMPETITION, the top 4 finalists - Anuj, Rajan, Sunny and Vipul, are judged on 4 different parameters – Presentation (P), Sequences (S), Time Duration (TD) and Difficulty Level (DL), by a panel of 3 judges – Krishna, Mahesh, and Rama.

The 3 judges use some sort of coding to rate the performance of the 4 finalists on 4 parameters. Following is the additional information about it:

(i) Krishna uses the 4 letters – A, B, C and D to rate the performance of each of the 4 finalists. In each parameter, he gave a different letter to rate the performance of each finalist and for each finalist; he gave a different letter to rate the performance in each parameter. The same is also true for Mahesh except that he uses 4 different letters – E, F, G and H.

(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

### Q.1 [11831809]

For which finalist did Krishna used letter C to rate the performance in Time Duration (TD) parameter?

1 ☐ Anuj

2 ☐ Rajan

3 ☐ Sunny

4 ☐ Vipul

**Solution:**

**Correct Answer : 2**

[Answer key/Solution](#)

**Step 1:**

Let us first number each block for the sake of simplicity for explanation as shown below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E 17	18	19	20	33	34	35	36
Rajan	5	A 6	7	8	21	22	G 23	24	D 37	38	39	40
Sunny	9	D 10	11	12	25	26	H 27	28	E 41	42	43	44
Vipul	13	14	15	16	29	30	31	32	45	46	47	48

**Step 2:**

From condition (i), Now, for Krishna, the letters used are A, B, C and D. Every row and every column should have all 4 letters once. For Mahesh, the letters used are E, F, G and H, and again, every row and every column should have all 4 letters once. From condition (ii), Considering the letter A in block 6, letter in block 22 should be either E or G, so that there is a unique letter in block 38. But since in 2nd row (judged by Mahesh) there is already letter G, hence in block 22 there should be letter E, and hence in block 38 there should be letter C i.e., the letter equidistant from letters A and E in alphabetical series.

Now, considering letter D in block 10, letter in block 26 should be either F or H, so that there is a unique letter in block 42. But since in 3rd row (judged by Mahesh) there is already letter H (in block 27), hence in block 26 there should be letter F, and hence in block 42 there would be letter E.

Now, since in block 37, there is letter D hence in blocks 5 and 21 there should be letters (C and E respectively) or (B and F respectively) or (A and G respectively). But since in block 6 there is already A and in block 22, there is now E, hence only possibility for blocks 5 and 21 are B and F respectively. Using same logic letter in blocks 9 and 25 can be found to be C and G respectively (i.e., using letter E in block 41).

Now, only letter missing in 2nd row (for Mahesh) is H (i.e., in block 24) and only letter missing in 3rd row (for Mahesh) is E (i.e. in block 28) and only letter missing in 1st column (for Mahesh) is H (i.e., in block 29). Since now in block 29 we have letter H so that implies that out of the 2 letters left in 2nd column (for Mahesh) H would come in block 18 and G in block 30, hence in block 32 there would be F and in block 20 there would be G. Now remaining 2 blocks for Mahesh can be easily filled. The table for the 3 judges now looks like as given below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E	H	F	G	33	34	35	36
Rajan	B	A	7	8	F	E	G	H	D	C	39	40
Sunny	C	D	11	12	G	F	H	E	E	E	43	44
Vipul	13	14	15	16	H	G	E	F	45	46	47	48

**Step 3:**

Now since in block 17 there is E, hence in block 1 there can be either C or A but as there is already letter C in 1st column of Krishna therefore, in block 1 there has to be letter A. Similarly, as there is letter H in block 18, so there should be either D or B in block 2. But since there is already letter D in 2nd column of Krishna, hence in block 2 there should be letter B. As there is letter G in block 23, so there should be letter C or A in block 7. But as there is already letter A in 2nd row of Krishna, hence in block 7 there should be letter C. Using similar logics rest of the blocks for Krishna and then Rama can be filled.

The final table for the 3 judges is as given blow:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	A	B	D	C	E	H	F	G	C	E	E	E
Rajan	B	A	C	D	F	E	G	H	D	C	E	F
Sunny	C	D	B	A	G	F	H	E	E	E	E	C
Vipul	D	C	A	B	H	G	E	F	F	E	C	D

**Krishna used letter C to rate the performance in Time Duration (TD) parameter for Rajan.**

**Directions for questions 1 to 6:** Answer the questions on the basis of the information given below.

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The 3 judges use some sort of coding to rate the performance of the 4 finalists on 4 parameters. Following is the additional information about it:

(i) Krishna uses the 4 letters – A, B, C and D to rate the performance of each of the 4 finalists. In each parameter, he gave a different letter to rate the performance of each finalist and for each finalist; he gave a different letter to rate the performance in each parameter. The same is also true for Mahesh except that he uses 4 different letters – E, F, G and H.

(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

### Q.2 [11831809]

For which finalist(s) did Rama use letter 'E' to rate the performance in 3 of the 4 parameters?

1 ☐ Anuj

2 ☐ Both Rajan & Sunny

3 ☐ Both Anuj & Sunny

4 ☐ Both Anuj & Vipul



**Solution:**

**Correct Answer : 3**

[Answer key/Solution](#)

**Step 1:**

Let us first number each block for the sake of simplicity for explanation as shown below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E 17	18	19	20	33	34	35	36
Rajan	5	A 6	7	8	21	22	G 23	24	D 37	38	39	40
Sunny	9	D 10	11	12	25	26	H 27	28	E 41	42	43	44
Vipul	13	14	15	16	29	30	31	32	45	46	47	48

**Step 2:**

From condition (i), Now, for Krishna, the letters used are A, B, C and D. Every row and every column should have all 4 letters once. For Mahesh, the letters used are E, F, G and H, and again, every row and every column should have all 4 letters once. From condition (ii), Considering the letter A in block 6, letter in block 22 should be either E or G, so that there is a unique letter in block 38. But since in 2nd row (judged by Mahesh) there is already letter G, hence in block 22 there should be letter E, and hence in block 38 there should be letter C i.e., the letter equidistant from letters A and E in alphabetical series.

Now, considering letter D in block 10, letter in block 26 should be either F or H, so that there is a unique letter in block 42. But since in 3rd row (judged by Mahesh) there is already letter H (in block 27), hence in block 26 there should be letter F, and hence in block 42 there would be letter E.

Now, since in block 37, there is letter D hence in blocks 5 and 21 there should be letters (C and E respectively) or (B and F respectively) or (A and G respectively). But since in block 6 there is already A and in block 22, there is now E, hence only possibility for blocks 5 and 21 are B and F respectively. Using same logic letter in blocks 9 and 25 can be found to be C and G respectively (i.e., using letter E in block 41).

Now, only letter missing in 2nd row (for Mahesh) is H (i.e., in block 24) and only letter missing in 3rd row (for Mahesh) is E (i.e. in block 28) and only letter missing in 1st column (for Mahesh) is H (i.e., in block 29). Since now in block 29 we have letter H so that implies that out of the 2 letters left in 2nd column (for Mahesh) H would come in block 18 and G in block 30, hence in block 32 there would be F and in block 20 there would be G. Now remaining 2 blocks for Mahesh can be easily filled. The table for the 3 judges now looks like as given below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E	H	F	G	33	34	35	36
Rajan	B	A	7	8	F	E	G	H	D	C	39	40
Sunny	C	D	11	12	G	F	H	E	E	E	43	44
Vipul	13	14	15	16	H	G	E	F	45	46	47	48

**Step 3:**

Now since in block 17 there is E, hence in block 1 there can be either C or A but as there is already letter C in 1st column of Krishna therefore, in block 1 there has to be letter A. Similarly, as there is letter H in block 18, so there should be either D or B in block 2. But since there is already letter D in 2nd column of Krishna, hence in block 2 there should be letter B. As there is letter G in block 23, so there should be letter C or A in block 7. But as there is already letter A in 2nd row of Krishna, hence in block 7 there should be letter C. Using similar logics rest of the blocks for Krishna and then Rama can be filled.

The final table for the 3 judges is as given blow:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	A	B	D	C	E	H	F	G	C	E	E	E
Rajan	B	A	C	D	F	E	G	H	D	C	E	F
Sunny	C	D	B	A	G	F	H	E	E	E	E	C
Vipul	D	C	A	B	H	G	E	F	F	E	C	D

Rama used letter 'E' to rate the performance in 3 of the 4 parameters for both Anuj & Sunny.

**Directions for questions 1 to 6:** Answer the questions on the basis of the information given below.

In a SINGLES YOGASANA COMPETITION, the top 4 finalists - Anuj, Rajan, Sunny and Vipul, are judged on 4 different parameters – Presentation (P), Sequences (S), Time Duration (TD) and Difficulty Level (DL), by a panel of 3 judges – Krishna, Mahesh, and Rama.

The 3 judges use some sort of coding to rate the performance of the 4 finalists on 4 parameters. Following is the additional information about it:

(i) Krishna uses the 4 letters – A, B, C and D to rate the performance of each of the 4 finalists. In each parameter, he gave a different letter to rate the performance of each finalist and for each finalist; he gave a different letter to rate the performance in each parameter. The same is also true for Mahesh except that he uses 4 different letters – E, F, G and H.

(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

### Q.3 [11831809]

For which finalist(s) did Rama used a different letter to rate the performance in each of the 4 parameters?

1 ☐ Both Anuj & Rajan

2 ☐ Both Anuj & Sunny

3 ☐ Both Sunny & Vipul

4 ☐ Both Rajan & Vipul

**Solution:**

**Correct Answer : 4**

[Answer key/Solution](#)

**Step 1:**

Let us first number each block for the sake of simplicity for explanation as shown below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E 17	18	19	20	33	34	35	36
Rajan	5	A 6	7	8	21	22	G 23	24	D 37	38	39	40
Sunny	9	D 10	11	12	25	26	H 27	28	E 41	42	43	44
Vipul	13	14	15	16	29	30	31	32	45	46	47	48

**Step 2:**

From condition (i), Now, for Krishna, the letters used are A, B, C and D. Every row and every column should have all 4 letters once. For Mahesh, the letters used are E, F, G and H, and again, every row and every column should have all 4 letters once. From condition (ii), Considering the letter A in block 6, letter in block 22 should be either E or G, so that there is a unique letter in block 38. But since in 2nd row (judged by Mahesh) there is already letter G, hence in block 22 there should be letter E, and hence in block 38 there should be letter C i.e., the letter equidistant from letters A and E in alphabetical series.

Now, considering letter D in block 10, letter in block 26 should be either F or H, so that there is a unique letter in block 42. But since in 3rd row (judged by Mahesh) there is already letter H (in block 27), hence in block 26 there should be letter F, and hence in block 42 there would be letter E.

Now, since in block 37, there is letter D hence in blocks 5 and 21 there should be letters (C and E respectively) or (B and F respectively) or (A and G respectively). But since in block 6 there is already A and in block 22, there is now E, hence only possibility for blocks 5 and 21 are B and F respectively. Using same logic letter in blocks 9 and 25 can be found to be C and G respectively (i.e., using letter E in block 41).

Now, only letter missing in 2nd row (for Mahesh) is H (i.e., in block 24) and only letter missing in 3rd row (for Mahesh) is E (i.e. in block 28) and only letter missing in 1st column (for Mahesh) is H (i.e., in block 29). Since now in block 29 we have letter H so that implies that out of the 2 letters left in 2nd column (for Mahesh) H would come in block 18 and G in block 30, hence in block 32 there would be F and in block 20 there would be G. Now remaining 2 blocks for Mahesh can be easily filled. The table for the 3 judges now looks like as given below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E	H	F	G	33	34	35	36
Rajan	B	A	7	8	F	E	G	H	D	C	39	40
Sunny	C	D	11	12	G	F	H	E	E	E	43	44
Vipul	13	14	15	16	H	G	E	F	45	46	47	48

**Step 3:**

Now since in block 17 there is E, hence in block 1 there can be either C or A but as there is already letter C in 1st column of Krishna therefore, in block 1 there has to be letter A. Similarly, as there is letter H in block 18, so there should be either D or B in block 2. But since there is already letter D in 2nd column of Krishna, hence in block 2 there should be letter B. As there is letter G in block 23, so there should be letter C or A in block 7. But as there is already letter A in 2nd row of Krishna, hence in block 7 there should be letter C. Using similar logics rest of the blocks for Krishna and then Rama can be filled.

The final table for the 3 judges is as given blow:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	A	B	D	C	E	H	F	G	C	E	E	E
Rajan	B	A	C	D	F	E	G	H	D	C	E	F
Sunny	C	D	B	A	G	F	H	E	E	E	E	C
Vipul	D	C	A	B	H	G	E	F	F	E	C	D

**Rama used a different letter to rate the performance in each of the 4 parameters for both Rajan & Vipul.**



**Directions for questions 1 to 6:** Answer the questions on the basis of the information given below.

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(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

#### Q.4 [11831809]

In which parameter did Mahesh use letter F for Vipul?

1 ☐ Difficulty Level (DL)

2 ☐ Time Duration (TD)

3 ☐ Sequences (S)

4 ☐ Presentation (P)



**Solution:**

**Correct Answer : 1**

[Answer key/Solution](#)

**Step 1:**

Let us first number each block for the sake of simplicity for explanation as shown below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E 17	18	19	20	33	34	35	36
Rajan	5	A 6	7	8	21	22	G 23	24	D 37	38	39	40
Sunny	9	D 10	11	12	25	26	H 27	28	E 41	42	43	44
Vipul	13	14	15	16	29	30	31	32	45	46	47	48

**Step 2:**

From condition (i), Now, for Krishna, the letters used are A, B, C and D. Every row and every column should have all 4 letters once. For Mahesh, the letters used are E, F, G and H, and again, every row and every column should have all 4 letters once. From condition (ii), Considering the letter A in block 6, letter in block 22 should be either E or G, so that there is a unique letter in block 38. But since in 2nd row (judged by Mahesh) there is already letter G, hence in block 22 there should be letter E, and hence in block 38 there should be letter C i.e., the letter equidistant from letters A and E in alphabetical series.

Now, considering letter D in block 10, letter in block 26 should be either F or H, so that there is a unique letter in block 42. But since in 3rd row (judged by Mahesh) there is already letter H (in block 27), hence in block 26 there should be letter F, and hence in block 42 there would be letter E.

Now, since in block 37, there is letter D hence in blocks 5 and 21 there should be letters (C and E respectively) or (B and F respectively) or (A and G respectively). But since in block 6 there is already A and in block 22, there is now E, hence only possibility for blocks 5 and 21 are B and F respectively. Using same logic letter in blocks 9 and 25 can be found to be C and G respectively (i.e., using letter E in block 41).

Now, only letter missing in 2nd row (for Mahesh) is H (i.e., in block 24) and only letter missing in 3rd row (for Mahesh) is E (i.e. in block 28) and only letter missing in 1st column (for Mahesh) is H (i.e., in block 29). Since now in block 29 we have letter H so that implies that out of the 2 letters left in 2nd column (for Mahesh) H would come in block 18 and G in block 30, hence in block 32 there would be F and in block 20 there would be G. Now remaining 2 blocks for Mahesh can be easily filled. The table for the 3 judges now looks like as given below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
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Rajan	B	A	7	8	F	E	G	H	D	C	39	40
Sunny	C	D	11	12	G	F	H	E	E	E	43	44
Vipul	13	14	15	16	H	G	E	F	45	46	47	48

**Step 3:**

Now since in block 17 there is E, hence in block 1 there can be either C or A but as there is already letter C in 1st column of Krishna therefore, in block 1 there has to be letter A. Similarly, as there is letter H in block 18, so there should be either D or B in block 2. But since there is already letter D in 2nd column of Krishna, hence in block 2 there should be letter B. As there is letter G in block 23, so there should be letter C or A in block 7. But as there is already letter A in 2nd row of Krishna, hence in block 7 there should be letter C. Using similar logics rest of the blocks for Krishna and then Rama can be filled.

The final table for the 3 judges is as given blow:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	A	B	D	C	E	H	F	G	C	E	E	E
Rajan	B	A	C	D	F	E	G	H	D	C	E	F
Sunny	C	D	B	A	G	F	H	E	E	E	E	C
Vipul	D	C	A	B	H	G	E	F	F	E	C	D

**Mahesh used letter F for Vipul in Difficulty Level (DL) parameter.**

**Directions for questions 1 to 6:** Answer the questions on the basis of the information given below.

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The 3 judges use some sort of coding to rate the performance of the 4 finalists on 4 parameters. Following is the additional information about it:

(i) Krishna uses the 4 letters – A, B, C and D to rate the performance of each of the 4 finalists. In each parameter, he gave a different letter to rate the performance of each finalist and for each finalist; he gave a different letter to rate the performance in each parameter. The same is also true for Mahesh except that he uses 4 different letters – E, F, G and H.

(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

**Q.5 [11831809]**

Which of the following statements is correct about the ratings given to Vipul in the Time Duration (TD) parameter by Judges Krishna, Mahesh and Rama respectively?

1 ☐ A, C, F

2 ☐ A, E, C

3 ☐ D, G, C

4 ☐ A, F, C

**Solution:**

**Correct Answer : 2**

[Answer key/Solution](#)

**Step 1:**

Let us first number each block for the sake of simplicity for explanation as shown below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E 17	18	19	20	33	34	35	36
Rajan	5	A 6	7	8	21	22	G 23	24	D 37	38	39	40
Sunny	9	D 10	11	12	25	26	H 27	28	E 41	42	43	44
Vipul	13	14	15	16	29	30	31	32	45	46	47	48

**Step 2:**

From condition (i), Now, for Krishna, the letters used are A, B, C and D. Every row and every column should have all 4 letters once. For Mahesh, the letters used are E, F, G and H, and again, every row and every column should have all 4 letters once. From condition (ii), Considering the letter A in block 6, letter in block 22 should be either E or G, so that there is a unique letter in block 38. But since in 2nd row (judged by Mahesh) there is already letter G, hence in block 22 there should be letter E, and hence in block 38 there should be letter C i.e., the letter equidistant from letters A and E in alphabetical series.

Now, considering letter D in block 10, letter in block 26 should be either F or H, so that there is a unique letter in block 42. But since in 3rd row (judged by Mahesh) there is already letter H (in block 27), hence in block 26 there should be letter F, and hence in block 42 there would be letter E.

Now, since in block 37, there is letter D hence in blocks 5 and 21 there should be letters (C and E respectively) or (B and F respectively) or (A and G respectively). But since in block 6 there is already A and in block 22, there is now E, hence only possibility for blocks 5 and 21 are B and F respectively. Using same logic letter in blocks 9 and 25 can be found to be C and G respectively (i.e., using letter E in block 41).

Now, only letter missing in 2nd row (for Mahesh) is H (i.e., in block 24) and only letter missing in 3rd row (for Mahesh) is E (i.e. in block 28) and only letter missing in 1st column (for Mahesh) is H (i.e., in block 29). Since now in block 29 we have letter H so that implies that out of the 2 letters left in 2nd column (for Mahesh) H would come in block 18 and G in block 30, hence in block 32 there would be F and in block 20 there would be G. Now remaining 2 blocks for Mahesh can be easily filled. The table for the 3 judges now looks like as given below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E	H	F	G	33	34	35	36
Rajan	B	A	7	8	F	E	G	H	D	C	39	40
Sunny	C	D	11	12	G	F	H	E	E	E	43	44
Vipul	13	14	15	16	H	G	E	F	45	46	47	48

**Step 3:**

Now since in block 17 there is E, hence in block 1 there can be either C or A but as there is already letter C in 1st column of Krishna therefore, in block 1 there has to be letter A. Similarly, as there is letter H in block 18, so there should be either D or B in block 2. But since there is already letter D in 2nd column of Krishna, hence in block 2 there should be letter B. As there is letter G in block 23, so there should be letter C or A in block 7. But as there is already letter A in 2nd row of Krishna, hence in block 7 there should be letter C. Using similar logics rest of the blocks for Krishna and then Rama can be filled.

The final table for the 3 judges is as given blow:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	A	B	D	C	E	H	F	G	C	E	E	E
Rajan	B	A	C	D	F	E	G	H	D	C	E	F
Sunny	C	D	B	A	G	F	H	E	E	E	E	C
Vipul	D	C	A	B	H	G	E	F	F	E	C	D



The ratings given to Vipul in the Time Duration (TD) parameter by Judges Krishna, Mahesh and Rama is A, E, C respectively.

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**Directions for questions 1 to 6:** Answer the questions on the basis of the information given below.

In a SINGLES YOGASANA COMPETITION, the top 4 finalists - Anuj, Rajan, Sunny and Vipul, are judged on 4 different parameters – Presentation (P), Sequences (S), Time Duration (TD) and Difficulty Level (DL), by a panel of 3 judges – Krishna, Mahesh, and Rama.

The 3 judges use some sort of coding to rate the performance of the 4 finalists on 4 parameters. Following is the additional information about it:

(i) Krishna uses the 4 letters – A, B, C and D to rate the performance of each of the 4 finalists. In each parameter, he gave a different letter to rate the performance of each finalist and for each finalist; he gave a different letter to rate the performance in each parameter. The same is also true for Mahesh except that he uses 4 different letters – E, F, G and H.

(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

**Q.6 [11831809]**

Which of the following statements is FALSE?

- ☐ The rating given by Mahesh to Rajan in the Sequences (S) parameter is E.
- ☐ The rating given by Krishna to Anuj in the Difficulty Level (DL) parameter is C.
- ☐ The rating given by Mahesh to Sunny in the Difficulty Level (DL) parameter is F.
- ☐ The rating given by Rama to Vipul in the Time Duration (TD) parameter is C.



**Solution:**

**Correct Answer : 3**

[Answer key/Solution](#)

**Step 1:**

Let us first number each block for the sake of simplicity for explanation as shown below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E 17	18	19	20	33	34	35	36
Rajan	5	A 6	7	8	21	22	G 23	24	D 37	38	39	40
Sunny	9	D 10	11	12	25	26	H 27	28	E 41	42	43	44
Vipul	13	14	15	16	29	30	31	32	45	46	47	48

**Step 2:**

From condition (i), Now, for Krishna, the letters used are A, B, C and D. Every row and every column should have all 4 letters once. For Mahesh, the letters used are E, F, G and H, and again, every row and every column should have all 4 letters once. From condition (ii), Considering the letter A in block 6, letter in block 22 should be either E or G, so that there is a unique letter in block 38. But since in 2nd row (judged by Mahesh) there is already letter G, hence in block 22 there should be letter E, and hence in block 38 there should be letter C i.e., the letter equidistant from letters A and E in alphabetical series.

Now, considering letter D in block 10, letter in block 26 should be either F or H, so that there is a unique letter in block 42. But since in 3rd row (judged by Mahesh) there is already letter H (in block 27), hence in block 26 there should be letter F, and hence in block 42 there would be letter E.

Now, since in block 37, there is letter D hence in blocks 5 and 21 there should be letters (C and E respectively) or (B and F respectively) or (A and G respectively). But since in block 6 there is already A and in block 22, there is now E, hence only possibility for blocks 5 and 21 are B and F respectively. Using same logic letter in blocks 9 and 25 can be found to be C and G respectively (i.e., using letter E in block 41).

Now, only letter missing in 2nd row (for Mahesh) is H (i.e., in block 24) and only letter missing in 3rd row (for Mahesh) is E (i.e. in block 28) and only letter missing in 1st column (for Mahesh) is H (i.e., in block 29). Since now in block 29 we have letter H so that implies that out of the 2 letters left in 2nd column (for Mahesh) H would come in block 18 and G in block 30, hence in block 32 there would be F and in block 20 there would be G. Now remaining 2 blocks for Mahesh can be easily filled. The table for the 3 judges now looks like as given below:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	1	2	3	4	E	H	F	G	33	34	35	36
Rajan	B	A	7	8	F	E	G	H	D	C	39	40
Sunny	C	D	11	12	G	F	H	E	E	E	43	44
Vipul	13	14	15	16	H	G	E	F	45	46	47	48

**Step 3:**

Now since in block 17 there is E, hence in block 1 there can be either C or A but as there is already letter C in 1st column of Krishna therefore, in block 1 there has to be letter A. Similarly, as there is letter H in block 18, so there should be either D or B in block 2. But since there is already letter D in 2nd column of Krishna, hence in block 2 there should be letter B. As there is letter G in block 23, so there should be letter C or A in block 7. But as there is already letter A in 2nd row of Krishna, hence in block 7 there should be letter C. Using similar logics rest of the blocks for Krishna and then Rama can be filled.

The final table for the 3 judges is as given blow:

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj	A	B	D	C	E	H	F	G	C	E	E	E
Rajan	B	A	C	D	F	E	G	H	D	C	E	F
Sunny	C	D	B	A	G	F	H	E	E	E	E	C
Vipul	D	C	A	B	H	G	E	F	F	E	C	D

The statement given in option (3) is FALSE.

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**Direction for questions 7 to 10:** Answer the questions on the basis of the information given below.

Four friends - Azad, Bipin, Chirag and Dhruv went to a shopping mall and bought a total of 36 items of three categories - Accessory, Clothing and Grocery. None of the 4 friends bought the same number of items. And each of them bought at least one item from each category. The following facts are also known about the categories:

- (i) The number of accessories and grocery items purchased by Azad were the same, while the number of clothing items purchased by him was twice that of his accessory items.
- (ii) The number of accessories purchased by Bipin was the average of the number of articles purchased by him in the other two categories. The number of grocery items purchased by Bipin was more than the number of accessories purchased by him.
- (iii) Out of the total items purchased by Chirag,  $\frac{3}{5}$ th belonged to accessory category and  $\frac{1}{5}$ th belonged to grocery category.
- (iv) Accessories, clothing and grocery items purchased by Dhruv were in the ratio 1:1:3.
- (v) The total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad.

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**Q.7 [11831809]**

Based on the given information, which of the following statements MUST be TRUE?

- 1 ☐ The number of grocery items purchased by Azad and Bipin were equal.
  - 2 ☐ The total number of accessories purchased was more than the number of clothing items.
  - 3 ☐ The total number of grocery items purchased was less than the number of clothing items.
  - 4 ☐ The number of items of clothing purchased by Bipin and Chirag were equal.
-

**Solution:**

**Correct Answer : 2**

 Answer key/Solution

**Step 1:**

From condition (i), (ii), (iii) and (iv), we get

	Accessory	Clothing	Grocery	Total
Azad	x	2x	x	4x
Bipin	$(a + b)/2$	a	b	$3(a + b)/2$
Chirag	3z	z	z	5z
Dhruv	y	y	3y	5y
Total				36

**Step 2:**

Also, from condition (ii),

$(a + b)/2 < b$  or,  $a < b$  and  $3(a + b)/2$  has to be greater than 3 and a multiple of 3.

Let  $3(a + b)/2 = 6$ , then (2, 1, 3) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 9$ , then (3, 2/1, 4/5) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 12$ , then (4, 3/2/1, 5/6/7) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

For  $x = 1$ , (1, 2, 1). For  $x = 2$ , (2, 4, 2). For  $x = 3$ , (3, 6, 3). For  $x = 4$ , (4, 8, 4) and so on.

**Step 3:**

From condition (v), the total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad. Therefore,  $x$  must be at least 3.

**Case 1:**

For  $x = 3 \Rightarrow 4x = 12$  i.e., (3, 6, 3)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 1, 3)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For  $3(a + b)/2 = 9$  i.e., (3, 2/1, 4/5) (This is possible.) and for  $3(a + b)/2 = 12$  (Since equal number of items are not possible. So, this is not possible.)

**Case 2:**

For  $x = 4 \Rightarrow 4x = 16$  i.e., (4, 8, 4)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 3, 1)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For the remaining 5 items,  $3(a + b)/2 = 5 \Rightarrow (a + b) = 10/3$  (This is not possible.)

Hence, from case 1,  $4x = 12$ ,  $5y = 5$ ,  $5z = 10$  and  $3(a + b)/2 = 9$ .

Hence, the final table can be shown as:

	Accessory	Clothing	Grocery	Total
Azad	3	6	3	12
Bipin	3	2/1,	4/5,	9
Chirag	6	2	2	10
Dhruv	1	1	3	5
Total	13	11/10,	12/13,	36

**The statement given in option (2) MUST be TRUE.**

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**Direction for questions 7 to 10:** Answer the questions on the basis of the information given below.

Four friends - Azad, Bipin, Chirag and Dhruv went to a shopping mall and bought a total of 36 items of three categories - Accessory, Clothing and Grocery. None of the 4 friends bought the same number of items. And each of them bought at least one item from each category. The following facts are also known about the categories:

- (i) The number of accessories and grocery items purchased by Azad were the same, while the number of clothing items purchased by him was twice that of his accessory items.
- (ii) The number of accessories purchased by Bipin was the average of the number of articles purchased by him in the other two categories. The number of grocery items purchased by Bipin was more than the number of accessories purchased by him.
- (iii) Out of the total items purchased by Chirag,  $\frac{3}{5}$ th belonged to accessory category and  $\frac{1}{5}$ th belonged to grocery category.
- (iv) Accessories, clothing and grocery items purchased by Dhruv were in the ratio 1:1:3.
- (v) The total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad.

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**Q.8 [11831809]**

What was the absolute difference between the number of items of clothing purchased by Azad and Dhruv?

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**Solution:**

**Correct Answer : 5**

 Answer key/Solution

**Step 1:**

From condition (i), (ii), (iii) and (iv), we get

	Accessory	Clothing	Grocery	Total
Azad	$x$	$2x$	$x$	$4x$
Bipin	$(a + b)/2$	$a$	$b$	$3(a + b)/2$
Chirag	$3z$	$z$	$z$	$5z$
Dhruv	$y$	$y$	$3y$	$5y$
Total				36

**Step 2:**

Also, from condition (ii),

$(a + b)/2 < b$  or,  $a < b$  and  $3(a + b)/2$  has to be greater than 3 and a multiple of 3.

Let  $3(a + b)/2 = 6$ , then (2, 1, 3) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 9$ , then (3, 2/1, 4/5) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 12$ , then (4, 3/2/1, 5/6/7) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

For  $x = 1$ , (1, 2, 1). For  $x = 2$ , (2, 4, 2). For  $x = 3$ , (3, 6, 3). For  $x = 4$ , (4, 8, 4) and so on.

**Step 3:**

From condition (v), the total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad. Therefore,  $x$  must be at least 3.

**Case 1:**

For  $x = 3 \Rightarrow 4x = 12$  i.e., (3, 6, 3)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 1, 3)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For  $3(a + b)/2 = 9$  i.e., (3, 2/1, 4/5) (This is possible.) and for  $3(a + b)/2 = 12$  (Since equal number of items are not possible. So, this is not possible.)

**Case 2:**

For  $x = 4 \Rightarrow 4x = 16$  i.e., (4, 8, 4)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 3, 1)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For the remaining 5 items,  $3(a + b)/2 = 5 \Rightarrow (a + b) = 10/3$  (This is not possible.)

Hence, from case 1,  $4x = 12$ ,  $5y = 5$ ,  $5z = 10$  and  $3(a + b)/2 = 9$ .

Hence, the final table can be shown as:

	Accessory	Clothing	Grocery	Total
Azad	3	6	3	12
Bipin	3	2/1,	4/5,	9
Chirag	6	2	2	10
Dhruv	1	1	3	5
Total	13	11/10,	12/13,	36

**The required absolute difference =  $6 - 1 = 5$ .**

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**Direction for questions 7 to 10:** Answer the questions on the basis of the information given below.

Four friends - Azad, Bipin, Chirag and Dhruv went to a shopping mall and bought a total of 36 items of three categories - Accessory, Clothing and Grocery. None of the 4 friends bought the same number of items. And each of them bought at least one item from each category. The following facts are also known about the categories:

- (i) The number of accessories and grocery items purchased by Azad were the same, while the number of clothing items purchased by him was twice that of his accessory items.
- (ii) The number of accessories purchased by Bipin was the average of the number of articles purchased by him in the other two categories. The number of grocery items purchased by Bipin was more than the number of accessories purchased by him.
- (iii) Out of the total items purchased by Chirag,  $\frac{3}{5}$ th belonged to accessory category and  $\frac{1}{5}$ th belonged to grocery category.
- (iv) Accessories, clothing and grocery items purchased by Dhruv were in the ratio 1:1:3.
- (v) The total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad.

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**Q.9 [11831809]**

What was the total number of items purchased by Bipin?

---

**Solution:**

**Correct Answer : 9**

 Answer key/Solution

**Step 1:**

From condition (i), (ii), (iii) and (iv), we get

	Accessory	Clothing	Grocery	Total
Azad	$x$	$2x$	$x$	$4x$
Bipin	$(a + b)/2$	$a$	$b$	$3(a + b)/2$
Chirag	$3z$	$z$	$z$	$5z$
Dhruv	$y$	$y$	$3y$	$5y$
Total				36

**Step 2:**

Also, from condition (ii),

$(a + b)/2 < b$  or,  $a < b$  and  $3(a + b)/2$  has to be greater than 3 and a multiple of 3.

Let  $3(a + b)/2 = 6$ , then (2, 1, 3) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 9$ , then (3, 2/1, 4/5) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 12$ , then (4, 3/2/1, 5/6/7) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

For  $x = 1$ , (1, 2, 1). For  $x = 2$ , (2, 4, 2). For  $x = 3$ , (3, 6, 3). For  $x = 4$ , (4, 8, 4) and so on.

**Step 3:**

From condition (v), the total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad. Therefore,  $x$  must be at least 3.

**Case 1:**

For  $x = 3 \Rightarrow 4x = 12$  i.e., (3, 6, 3)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 1, 3)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For  $3(a + b)/2 = 9$  i.e., (3, 2/1, 4/5) (This is possible.) and for  $3(a + b)/2 = 12$  (Since equal number of items are not possible. So, this is not possible.)

**Case 2:**

For  $x = 4 \Rightarrow 4x = 16$  i.e., (4, 8, 4)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 3, 1)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For the remaining 5 items,  $3(a + b)/2 = 5 \Rightarrow (a + b) = 10/3$  (This is not possible.)

Hence, from case 1,  $4x = 12$ ,  $5y = 5$ ,  $5z = 10$  and  $3(a + b)/2 = 9$ .

Hence, the final table can be shown as:

	Accessory	Clothing	Grocery	Total
Azad	3	6	3	12
Bipin	3	2/1,	4/5,	9
Chirag	6	2	2	10
Dhruv	1	1	3	5
Total	13	11/10,	12/13,	36

**The total number of items purchased by Bipin was = 9.**

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**Direction for questions 7 to 10:** Answer the questions on the basis of the information given below.

Four friends - Azad, Bipin, Chirag and Dhruv went to a shopping mall and bought a total of 36 items of three categories - Accessory, Clothing and Grocery. None of the 4 friends bought the same number of items. And each of them bought at least one item from each category. The following facts are also known about the categories:

- (i) The number of accessories and grocery items purchased by Azad were the same, while the number of clothing items purchased by him was twice that of his accessory items.
- (ii) The number of accessories purchased by Bipin was the average of the number of articles purchased by him in the other two categories. The number of grocery items purchased by Bipin was more than the number of accessories purchased by him.
- (iii) Out of the total items purchased by Chirag,  $\frac{3}{5}$ th belonged to accessory category and  $\frac{1}{5}$ th belonged to grocery category.
- (iv) Accessories, clothing and grocery items purchased by Dhruv were in the ratio 1:1:3.
- (v) The total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad.

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**Q.10 [11831809]**

Which of the following could not be uniquely determined on the basis of the given information?

- 1 ☐ The number of accessories purchased by Bipin.
  - 2 ☐ The total number of items purchased by Dhruv in the three categories.
  - 3 ☐ Total number of grocery items purchased.
  - 4 ☐ The total number of accessories purchased.
-



**Solution:**

**Correct Answer : 3**

 Answer key/Solution

**Step 1:**

From condition (i), (ii), (iii) and (iv), we get

	Accessory	Clothing	Grocery	Total
Azad	x	2x	x	4x
Bipin	$(a + b)/2$	a	b	$3(a + b)/2$
Chirag	3z	z	z	5z
Dhruv	y	y	3y	5y
Total				36

**Step 2:**

Also, from condition (ii),

$(a + b)/2 < b$  or,  $a < b$  and  $3(a + b)/2$  has to be greater than 3 and a multiple of 3.

Let  $3(a + b)/2 = 6$ , then (2, 1, 3) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 9$ , then (3, 2/1, 4/5) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

Let  $3(a + b)/2 = 12$ , then (4, 3/2/1, 5/6/7) is a possible number of items in Accessory, Clothing and Grocery categories respectively.

For  $x = 1$ , (1, 2, 1). For  $x = 2$ , (2, 4, 2). For  $x = 3$ , (3, 6, 3). For  $x = 4$ , (4, 8, 4) and so on.

**Step 3:**

From condition (v), the total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad. Therefore,  $x$  must be at least 3.

**Case 1:**

For  $x = 3 \Rightarrow 4x = 12$  i.e., (3, 6, 3)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 1, 3)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For  $3(a + b)/2 = 9$  i.e., (3, 2/1, 4/5) (This is possible.) and for  $3(a + b)/2 = 12$  (Since equal number of items are not possible. So, this is not possible.)

**Case 2:**

For  $x = 4 \Rightarrow 4x = 16$  i.e., (4, 8, 4)

For  $y = 1 \Rightarrow 5y = 5$  i.e., (1, 3, 1)

For  $z = 2 \Rightarrow 5z = 10$  i.e., (6, 2, 2)

For the remaining 5 items,  $3(a + b)/2 = 5 \Rightarrow (a + b) = 10/3$  (This is not possible.)

Hence, from case 1,  $4x = 12$ ,  $5y = 5$ ,  $5z = 10$  and  $3(a + b)/2 = 9$ .

Hence, the final table can be shown as:

	Accessory	Clothing	Grocery	Total
Azad	3	6	3	12
Bipin	3	2/1,	4/5,	9
Chirag	6	2	2	10
Dhruv	1	1	3	5
Total	13	11/10,	12/13,	36

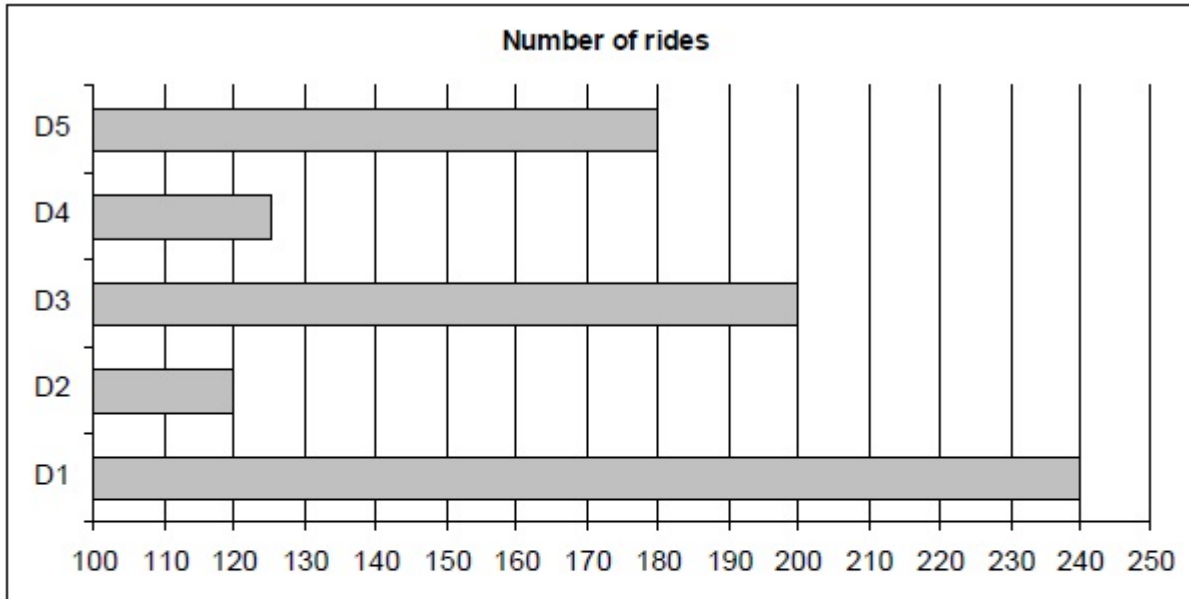
The statement given in option (3) could not be uniquely determined on the basis of the given information.

Bookmark

FeedBack

**Direction for questions 11 to 14:** Answer the questions on the basis of the information given below.

The bar graph given below shows the number of rides completed by 5 different drivers D1, D2, D3, D4, and D5 in a month and the table given below provides their earnings (in Rs.) as per individual rides accepted via different platforms – Uber, Ola, Meru and Rapido. Every driver earns Rs. a, b, c and d per ride for one ride completed in Uber, Ola, Meru and Rapido respectively.



Driver	Uber	Ola	Meru	Rapido
D1	30000	8800	9000	2000
D2	22500	3300	1500	500
D3	31250	3300	4500	3000
D4	26250	1760	1500	200
D5	37500	1100	2250	1000

In addition to their regular earnings for every 10th ride completed by any driver in Uber, Ola, Meru and Rapido, the driver gets Rs. 1,000, Rs. 800, Rs. 500 and Rs. 200 respectively as an incentive. In Uber, five drivers completed exactly 590 rides in total.

**Q.11 [11831809]**

How many rides did D2 complete in Meru?

**Solution:**

**Correct Answer : 10**

 Answer key/Solution

**Step 1:**

Number of rides completed in Uber = 590.

The amount earned for Uber per ride  $(30000 + 22500 + 31250 + 26250 + 37500)/590 = \text{Rs. } 250$

For every ride, the driver was given Rs. 250 in Uber.

Driver	Number of rides	Uber	Ola	Meru	Rapido
D1	240	120	$8z/3$	$6y$	$2x$
D2	120	90	$z$	$y$	$x/2$
D3	200	125	$z$	$3y$	$3x$
D4	125	105	$8z/15$	$y$	$x/5$
D5	180	150	$z/3$	$3y/2$	$x$

$90 + z + y + x/2 = 120$  and,

$125 + z + 3y + 3x = 200$

Solving these equations we get,

$5x + 4y = 90$

Form other equations and solve to get,  $x = 10$ ,  $y = 10$  and  $z = 15$ .

**Step 2:**

Hence, the final table can be shown as:

Driver	Number of rides	Uber Rs. 250/ride	Ola Rs. 220/ride	Meru Rs. 150/ride	Rapido Rs. 100/ride
D1	240	120	40	60	20
D2	120	90	15	10	5
D3	200	125	15	30	30
D4	125	105	8	10	2
D5	180	150	5	15	10

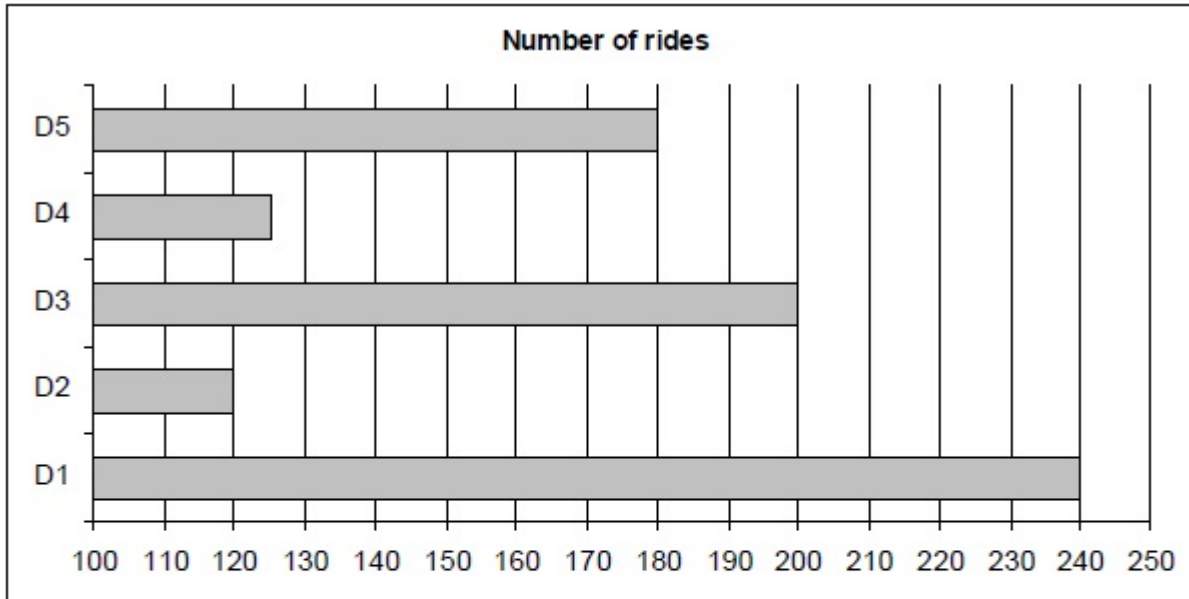
**D2 completed 10 rides in Meru.**

Bookmark

FeedBack

**Direction for questions 11 to 14:** Answer the questions on the basis of the information given below.

The bar graph given below shows the number of rides completed by 5 different drivers D1, D2, D3, D4, and D5 in a month and the table given below provides their earnings (in Rs.) as per individual rides accepted via different platforms – Uber, Ola, Meru and Rapido. Every driver earns Rs. a, b, c and d per ride for one ride completed in Uber, Ola, Meru and Rapido respectively.



Driver	Uber	Ola	Meru	Rapido
D1	30000	8800	9000	2000
D2	22500	3300	1500	500
D3	31250	3300	4500	3000
D4	26250	1760	1500	200
D5	37500	1100	2250	1000

In addition to their regular earnings for every 10th ride completed by any driver in Uber, Ola, Meru and Rapido, the driver gets Rs. 1,000, Rs. 800, Rs. 500 and Rs. 200 respectively as an incentive. In Uber, five drivers completed exactly 590 rides in total.

**Q.12 [11831809]**

How much more or less total amount (in Rs.) did D1 earn than D3?

1 ☐ 12,650

2 ☐ 11,250

3 ☐ 11,450

4 ☐ 10,450



**Solution:**

**Correct Answer : 3**

 Answer key/Solution

**Step 1:**

Number of rides completed in Uber = 590.

The amount earned for Uber per ride  $(30000 + 22500 + 31250 + 26250 + 37500)/590 = \text{Rs. } 250$

For every ride, the driver was given Rs. 250 in Uber.

Driver	Number of rides	Uber	Ola	Meru	Rapido
D1	240	120	$8z/3$	$6y$	$2x$
D2	120	90	$z$	$y$	$x/2$
D3	200	125	$z$	$3y$	$3x$
D4	125	105	$8z/15$	$y$	$x/5$
D5	180	150	$z/3$	$3y/2$	$x$

$90 + z + y + x/2 = 120$  and,

$125 + z + 3y + 3x = 200$

Solving these equations we get,

$5x + 4y = 90$

Form other equations and solve to get,  $x = 10$ ,  $y = 10$  and  $z = 15$ .

**Step 2:**

Hence, the final table can be shown as:

Driver	Number of rides	Uber Rs. 250/ride	Ola Rs. 220/ride	Meru Rs. 150/ride	Rapido Rs. 100/ride
D1	240	120	40	60	20
D2	120	90	15	10	5
D3	200	125	15	30	30
D4	125	105	8	10	2
D5	180	150	5	15	10

D1 completed 120 rides in Uber and for every 10th ride completed D1 must have gotten an incentive of Rs. 1,000.

Therefore,  $120/10 = 12$ , Rs. 12,000 of incentive Uber must have given.

Similarly, Ola, Meru and Rapido must have given  $= 4 \times 800 + 6 \times 500 + 2 \times 200 = \text{Rs. } 6,600$

Total money earned by D1  $= 30000 + 8800 + 9000 + 2000 + 12000 + 6600 = \text{Rs. } 68,400$  D3 completed 125 rides in Uber. Therefore, D3 must also have earned Rs. 12,000 incentive.

Similarly, Ola, Meru and Rapido must have given  $= 1 \times 800 + 3 \times 500 + 3 \times 200 = \text{Rs. } 2,900$

Total money earned by D3  $= 31250 + 3300 + 4500 + 3000 + 12000 + 2900 = \text{Rs. } 56,950$

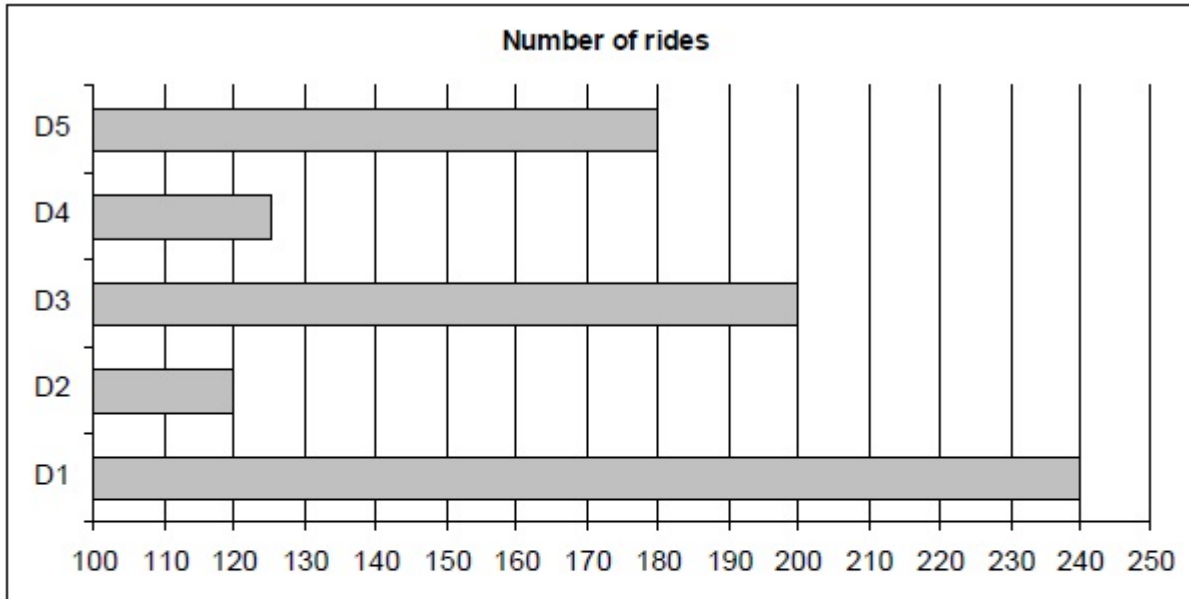
Hence, required difference  $= 68400 - 56950 = \text{Rs. } 11,450$ .

Bookmark

FeedBack

**Direction for questions 11 to 14:** Answer the questions on the basis of the information given below.

The bar graph given below shows the number of rides completed by 5 different drivers D1, D2, D3, D4, and D5 in a month and the table given below provides their earnings (in Rs.) as per individual rides accepted via different platforms – Uber, Ola, Meru and Rapido. Every driver earns Rs. a, b, c and d per ride for one ride completed in Uber, Ola, Meru and Rapido respectively.



Driver	Uber	Ola	Meru	Rapido
D1	30000	8800	9000	2000
D2	22500	3300	1500	500
D3	31250	3300	4500	3000
D4	26250	1760	1500	200
D5	37500	1100	2250	1000

In addition to their regular earnings for every 10th ride completed by any driver in Uber, Ola, Meru and Rapido, the driver gets Rs. 1,000, Rs. 800, Rs. 500 and Rs. 200 respectively as an incentive. In Uber, five drivers completed exactly 590 rides in total.

**Q.13 [11831809]**

If the incentives were not provided to any driver, then the percentage decrease in money of driver D4 earned in the month than the money he would have earned if incentives were given is closest to:

1 ☐ 24%

2 ☐ 26%

3 ☐ 28%

4 ☐ 30%

**Solution:**

**Correct Answer : 2**

 Answer key/Solution

**Step 1:**

Number of rides completed in Uber = 590.

The amount earned for Uber per ride  $(30000 + 22500 + 31250 + 26250 + 37500)/590 = \text{Rs. } 250$

For every ride, the driver was given Rs. 250 in Uber.

Driver	Number of rides	Uber	Ola	Meru	Rapido
D1	240	120	$8z/3$	$6y$	$2x$
D2	120	90	$z$	$y$	$x/2$
D3	200	125	$z$	$3y$	$3x$
D4	125	105	$8z/15$	$y$	$x/5$
D5	180	150	$z/3$	$3y/2$	$x$

$90 + z + y + x/2 = 120$  and,

$125 + z + 3y + 3x = 200$

Solving these equations we get,

$5x + 4y = 90$

Form other equations and solve to get,  $x = 10$ ,  $y = 10$  and  $z = 15$ .

**Step 2:**

Hence, the final table can be shown as:

Driver	Number of rides	Uber Rs. 250/ride	Ola Rs. 220/ride	Meru Rs. 150/ride	Rapido Rs. 100/ride
D1	240	120	40	60	20
D2	120	90	15	10	5
D3	200	125	15	30	30
D4	125	105	8	10	2
D5	180	150	5	15	10

D4 completed 105, 8, 10 and 2 rides in Uber, Ola, Meru, Rapido respectively.

Total incentives he could have earned =  $10,000 + 500 = \text{Rs. } 10,500$ .

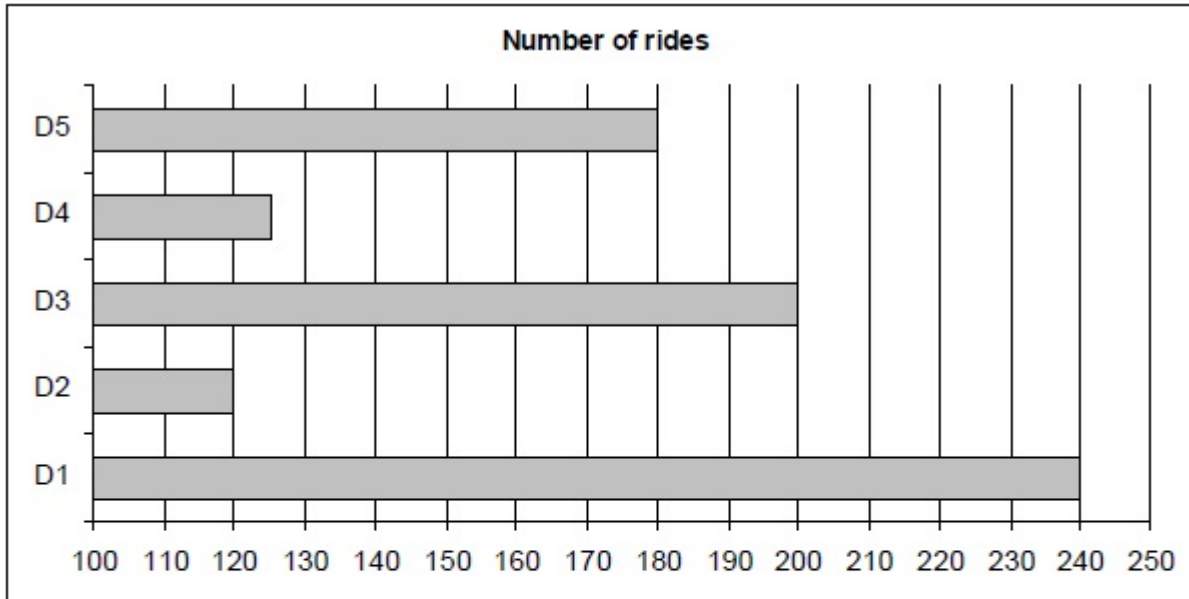
Hence, required percentage =  $10500 / 40210 \times 100 \approx 26\%$ .

Bookmark

FeedBack

**Direction for questions 11 to 14:** Answer the questions on the basis of the information given below.

The bar graph given below shows the number of rides completed by 5 different drivers D1, D2, D3, D4, and D5 in a month and the table given below provides their earnings (in Rs.) as per individual rides accepted via different platforms – Uber, Ola, Meru and Rapido. Every driver earns Rs. a, b, c and d per ride for one ride completed in Uber, Ola, Meru and Rapido respectively.



Driver	Uber	Ola	Meru	Rapido
D1	30000	8800	9000	2000
D2	22500	3300	1500	500
D3	31250	3300	4500	3000
D4	26250	1760	1500	200
D5	37500	1100	2250	1000

In addition to their regular earnings for every 10th ride completed by any driver in Uber, Ola, Meru and Rapido, the driver gets Rs. 1,000, Rs. 800, Rs. 500 and Rs. 200 respectively as an incentive. In Uber, five drivers completed exactly 590 rides in total.

**Q.14 [11831809]**

The driver rating from 1 to 5 is determined by “ $R = \text{Factor 1} + \text{Factor 2} - \text{Factor 3}$ ” where factor 1 is 30% of total earnings of the month, factor 2 is 150% of number of rides completed and factor 3 is 100% of number of rides cancelled by a driver in the month. The driver with highest R value is given a rating of 5 and driver with the least R value is given a rating of 1. If the number of rides cancelled was equal to 20% of Uber rides for each driver, then correct order of drivers as per their ratings in increasing order is:

1 ☐  $D2 < D4 < D5 < D3 < D1$

2 ☐  $D4 < D2 < D5 < D3 < D1$

$$3 \bigcirc D2 < D4 < D3 < D1 < D5$$

$$4 \bigcirc D2 < D4 < D3 < D5 < D1$$

**Solution:**

**Correct Answer : 4**

[Answer key/Solution](#)

**Step 1:**

Number of rides completed in Uber = 590.

The amount earned for Uber per ride  $(30000 + 22500 + 31250 + 26250 + 37500)/590 = \text{Rs. } 250$

For every ride, the driver was given Rs. 250 in Uber.

Driver	Number of rides	Uber	Ola	Meru	Rapido
D1	240	120	$8z/3$	$6y$	$2x$
D2	120	90	$z$	$y$	$x/2$
D3	200	125	$z$	$3y$	$3x$
D4	125	105	$8z/15$	$y$	$x/5$
D5	180	150	$z/3$	$3y/2$	$x$

$$90 + z + y + x/2 = 120 \text{ and,}$$

$$125 + z + 3y + 3x = 200$$

Solving these equations we get,

$$5x + 4y = 90$$

Form other equations and solve to get,  $x = 10$ ,  $y = 10$  and  $z = 15$ .

**Step 2:**

Hence, the final table can be shown as:

Driver	Number of rides	Uber Rs. 250/ride	Ola Rs. 220/ride	Meru Rs. 150/ride	Rapido Rs. 100/ride
D1	240	120	40	60	20
D2	120	90	15	10	5
D3	200	125	15	30	30
D4	125	105	8	10	2
D5	180	150	5	15	10

Driver	Factor 1	Factor 2	Factor 3	R
D1	20520	360	24	20856
D2	11430	180	18	11592
D3	17085	300	25	17360
D4	12063	187.5	21	12291.5
D5	17265	270	30	17505

Correct order in increasing order of the rating is:  $D2 < D4 < D3 < D5 < D1$ .

Hence, therefore, option (4) is the correct answer.

Bookmark

FeedBack



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**Direction for questions 15 to 20:** Answer the questions on the basis of the information given below.

The Defense Research Organization conducts a series of tests to recruit eligible candidates for some high profile jobs. It requires a candidate to take six tests - A, B, C, D, E and F - from Monday to Saturday, such that one test is held on each day. When an aspirant fills the application form he is supposed to enter the sequence for tests A to F in terms of the days on which the tests are taken, from Monday to Saturday and then when he appears for the tests he has to take the tests in the same sequence. The organization is considering some relaxations of the sequence of tests since it is observed that some aspirants often find it inconvenient to follow the sequence that is previously entered in the form. The organization decides to allow one out of three variations in the sequence of the six tests.

**Variation 1:** At most two out of the six tests are taken on different days. For example, if the original sequence of tests entered from Monday to Saturday was ABCDEF, then ABFDEC is allowed but EACDBF is not.

**Variation 2:** The first three tests in the application form can be taken in any order during the first three days and the last three tests can be taken in any order but in the last three days. For example, if CEABDF was the sequence of tests filled in the form from Monday to Saturday, then ACEDFB is allowed but CDEAFB is not.

**Variation 3:** The tests mentioned in the application form can be taken with a variation of one day before or after the actual day mentioned. For example, if ABCDEF is the original sequence of tests filled in the form from Monday to Saturday, then any one out of BACDEF or BADCEF or BADCFE is possible. That is one; two or three pairs of consecutive tests can be swapped.

---

**Q.15 [11831809]**

In case of variation 1, how many different sequences of tests are allowed for any given person's original sequence entered in the form?

---

**Solution:**

**Correct Answer : 16**

 Answer key/Solution

Let us see all the ways in which the tests can be taken for a candidate who opts for Variation 1.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A	B	C	D	E	F
B	A	C	D	E	F
C	B	A	D	E	F
D	B	C	A	E	F
E	B	C	D	A	F
F	B	C	D	E	A
A	C	B	D	E	F
A	D	C	B	E	F
A	E	C	D	B	F
A	F	C	D	E	B
A	B	D	C	E	F
A	B	E	D	C	F
A	B	F	D	E	C
A	B	C	E	D	F
A	B	C	F	E	D
A	B	C	D	F	E

**We can see that there are 16 ways in which the candidate can appear for the test.**

Bookmark

FeedBack

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**Direction for questions 15 to 20:** Answer the questions on the basis of the information given below.

The Defense Research Organization conducts a series of tests to recruit eligible candidates for some high profile jobs. It requires a candidate to take six tests - A, B, C, D, E and F - from Monday to Saturday, such that one test is held on each day. When an aspirant fills the application form he is supposed to enter the sequence for tests A to F in terms of the days on which the tests are taken, from Monday to Saturday and then when he appears for the tests he has to take the tests in the same sequence. The organization is considering some relaxations of the sequence of tests since it is observed that some aspirants often find it inconvenient to follow the sequence that is previously entered in the form. The organization decides to allow one out of three variations in the sequence of the six tests.

**Variation 1:** At most two out of the six tests are taken on different days. For example, if the original sequence of tests entered from Monday to Saturday was ABCDEF, then ABFDEC is allowed but EACDBF is not.

**Variation 2:** The first three tests in the application form can be taken in any order during the first three days and the last three tests can be taken in any order but in the last three days. For example, if CEABDF was the sequence of tests filled in the form from Monday to Saturday, then ACEDFB is allowed but CDEAFB is not.

**Variation 3:** The tests mentioned in the application form can be taken with a variation of one day before or after the actual day mentioned. For example, if ABCDEF is the original sequence of tests filled in the form from Monday to Saturday, then any one out of BACDEF or BADCEF or BADCFE is possible. That is one; two or three pairs of consecutive tests can be swapped.

---

**Q.16 [11831809]**

If the original sequence was ABCDEF, then find the number of ways for variation 1 in which the tests A and F taken either first or last.

---

1 ☐ 4

---

2 ☐ 6

---

3 ☐ 7

---

4 ☐ 8

---

**Solution:**

**Correct Answer : 4**

 Answer key/Solution

Let us see all the ways in which the tests can be taken for a candidate who opts for Variation 1.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A	B	C	D	E	F
B	A	C	D	E	F
C	B	A	D	E	F
D	B	C	A	E	F
E	B	C	D	A	F
F	B	C	D	E	A
A	C	B	D	E	F
A	D	C	B	E	F
A	E	C	D	B	F
A	F	C	D	E	B
A	B	D	C	E	F
A	B	E	D	C	F
A	B	F	D	E	C
A	B	C	E	D	F
A	B	C	F	E	D
A	B	C	D	F	E

We can observe from the above table that in 8 out of 16 allowed sequences tests A and F are taken either first or last.

Bookmark

FeedBack



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**Direction for questions 15 to 20:** Answer the questions on the basis of the information given below.

The Defense Research Organization conducts a series of tests to recruit eligible candidates for some high profile jobs. It requires a candidate to take six tests - A, B, C, D, E and F - from Monday to Saturday, such that one test is held on each day. When an aspirant fills the application form he is supposed to enter the sequence for tests A to F in terms of the days on which the tests are taken, from Monday to Saturday and then when he appears for the tests he has to take the tests in the same sequence. The organization is considering some relaxations of the sequence of tests since it is observed that some aspirants often find it inconvenient to follow the sequence that is previously entered in the form. The organization decides to allow one out of three variations in the sequence of the six tests.

**Variation 1:** At most two out of the six tests are taken on different days. For example, if the original sequence of tests entered from Monday to Saturday was ABCDEF, then ABFDEC is allowed but EACDBF is not.

**Variation 2:** The first three tests in the application form can be taken in any order during the first three days and the last three tests can be taken in any order but in the last three days. For example, if CEABDF was the sequence of tests filled in the form from Monday to Saturday, then ACEDFB is allowed but CDEAFB is not.

**Variation 3:** The tests mentioned in the application form can be taken with a variation of one day before or after the actual day mentioned. For example, if ABCDEF is the original sequence of tests filled in the form from Monday to Saturday, then any one out of BACDEF or BADCEF or BADCFE is possible. That is one; two or three pairs of consecutive tests can be swapped.

---

**Q.17 [11831809]**

It is known that passing in tests A and C is a prerequisite to appear for test E, then which of the following statements cannot be true in case a candidate opts for Variation 1?

- I. Test F is taken on Tuesday
- II. Test D is taken on Saturday
- III. Test B is taken on Friday

---

1 ☐ I only

---

2 ☐ III only

---

3 ☐ Both I & III

---

4 ☐ Both II & III

---

**Solution:**

**Correct Answer : 2**

 Answer key/Solution

Let us see all the ways in which the tests can be taken for a candidate who opts for Variation 1.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A	B	C	D	E	F
B	A	C	D	E	F
C	B	A	D	E	F
D	B	C	A	E	F
E	B	C	D	A	F
F	B	C	D	E	A
A	C	B	D	E	F
A	D	C	B	E	F
A	E	C	D	B	F
A	F	C	D	E	B
A	B	D	C	E	F
A	B	E	D	C	F
A	B	F	D	E	C
A	B	C	E	D	F
A	B	C	F	E	D
A	B	C	D	F	E

If Test B is taken on Friday then Test E is taken on Tuesday, but C is a prerequisite for E. So C cannot be taken on Wednesday.

Bookmark

FeedBack

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**Direction for questions 15 to 20:** Answer the questions on the basis of the information given below.

The Defense Research Organization conducts a series of tests to recruit eligible candidates for some high profile jobs. It requires a candidate to take six tests - A, B, C, D, E and F - from Monday to Saturday, such that one test is held on each day. When an aspirant fills the application form he is supposed to enter the sequence for tests A to F in terms of the days on which the tests are taken, from Monday to Saturday and then when he appears for the tests he has to take the tests in the same sequence. The organization is considering some relaxations of the sequence of tests since it is observed that some aspirants often find it inconvenient to follow the sequence that is previously entered in the form. The organization decides to allow one out of three variations in the sequence of the six tests.

**Variation 1:** At most two out of the six tests are taken on different days. For example, if the original sequence of tests entered from Monday to Saturday was ABCDEF, then ABFDEC is allowed but EACDBF is not.

**Variation 2:** The first three tests in the application form can be taken in any order during the first three days and the last three tests can be taken in any order but in the last three days. For example, if CEABDF was the sequence of tests filled in the form from Monday to Saturday, then ACEDFB is allowed but CDEAFB is not.

**Variation 3:** The tests mentioned in the application form can be taken with a variation of one day before or after the actual day mentioned. For example, if ABCDEF is the original sequence of tests filled in the form from Monday to Saturday, then any one out of BACDEF or BADCEF or BADCFE is possible. That is one; two or three pairs of consecutive tests can be swapped.

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**Q.18 [11831809]**

Let X be the number of ways in which the tests can be taken if the tests mentioned in the original sequence for Wednesday and Thursday cannot be shifted and Y be the total number of ways in which the tests can be taken in case the candidate opts for variation 2. Find the ratio of X : Y respectively.

---

1 ☐ 1 : 9

---

2 ☐ 1 : 6

---

3 ☐ 2 : 9

---

4 ☐ 5 : 18

---

**Solution:**

**Correct Answer : 1**

 Answer key/Solution

Let the original sequence from Monday to Saturday be ABCDEF and let us consider ABC together and DEF together.

**In case of Variation 2:**

ABC can be taken in six ways: ABC, ACB, BAC, BCA, CBA, CAB

Similarly, DEF can be taken in six ways: DEF, DFE, EDF, EFD, FED, FDE

Hence, the six tests together can be taken in  $6 \times 6 = 36$ .

Let the original sequence of tests from Monday to Saturday be ABCDEF.

Total number of ways in which tests can be taken = 36

The possible ways in which a candidate can opt for variation 2 and take the tests such that the tests mentioned on

Wednesday and Thursday are not shifted will be: ABCDEF, BACDEF, ABCDFE, BACDFE Number of ways =  $2 \times 2 = 4$  ways.

Hence, the required ratio =  $4 : 36 = 1 : 9$ .

Bookmark

FeedBack

**Direction for questions 15 to 20:** Answer the questions on the basis of the information given below.

The Defense Research Organization conducts a series of tests to recruit eligible candidates for some high profile jobs. It requires a candidate to take six tests - A, B, C, D, E and F - from Monday to Saturday, such that one test is held on each day. When an aspirant fills the application form he is supposed to enter the sequence for tests A to F in terms of the days on which the tests are taken, from Monday to Saturday and then when he appears for the tests he has to take the tests in the same sequence. The organization is considering some relaxations of the sequence of tests since it is observed that some aspirants often find it inconvenient to follow the sequence that is previously entered in the form. The organization decides to allow one out of three variations in the sequence of the six tests.

**Variation 1:** At most two out of the six tests are taken on different days. For example, if the original sequence of tests entered from Monday to Saturday was ABCDEF, then ABFDEC is allowed but EACDBF is not.

**Variation 2:** The first three tests in the application form can be taken in any order during the first three days and the last three tests can be taken in any order but in the last three days. For example, if CEABDF was the sequence of tests filled in the form from Monday to Saturday, then ACEDFB is allowed but CDEAFB is not.

**Variation 3:** The tests mentioned in the application form can be taken with a variation of one day before or after the actual day mentioned. For example, if ABCDEF is the original sequence of tests filled in the form from Monday to Saturday, then any one out of BACDEF or BADCEF or BADCFE is possible. That is one; two or three pairs of consecutive tests can be swapped.

### Q.19 [11831809]

If the original sequence from Monday to Saturday was ABCDEF and the candidate realized that the topics in tests A, C and E are difficult and he requires at least one gap in between to prepare for these topics, then in how many ways can he appear for the tests in case he opts for variation 2?



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1 ○ 6

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2 ○ 5

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3 ○ 8

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4 ○ 12

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**Solution:**

**Correct Answer : 3**

**Let the original sequence from Monday to Saturday be ABCDEF and let us consider ABC together and DEF together.**

**In case of Variation 2:**

**ABC can be taken in six ways: ABC, ACB, BAC, BCA, CBA, CAB**

**Similarly, DEF can be taken in six ways: DEF, DFE, EDF, EFD, FED, FDE**

**Hence, the six tests together can be taken in  $6 \times 6 = 36$ .**

**The possible sequences are: ABCDEF, ABCDFE, ABCFED, ABCFDE CBADEF, CBADFE, CBAFED, CBAFDE**

**Hence, total number of ways =  $2 \times 4 = 8$ .**

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 Answer key/Solution

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**Q.20 [11831809]**

In case a candidate opts for variation 3, then in how many ways can he take his tests such that none of the tests are taken as per the original sequence?

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**Solution:**

**Correct Answer : 1**

**Let the original sequence from Monday to Saturday be ABCDEF.**

**The only case where none of the tests are taken as per the original plan is BADCFE.**

**Hence, the answer is 1 way.**

 [Answer key/Solution](#)

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