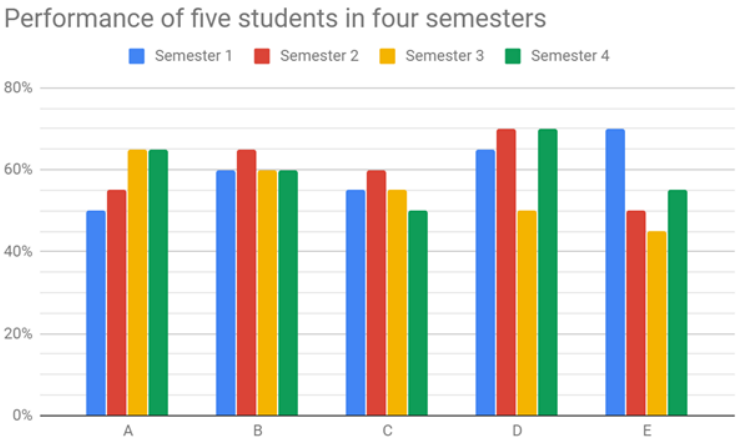


Refer to the data below and answer the questions that follow.

The following graph shows the performance of five students, named A, B, C, D and E of Imperial College of Engineering, Delhi in four semester exams.



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

Additionally, the following points are known:

1. A scored equal marks in two of the four semesters.
2. The difference in the marks scored by B in two of the four semesters was 120.
3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

1) For how many students out of the five, can we uniquely determine the marks scored in all the four semesters?

- ☐ 2
- ☐ 3
- ☐ 4
- ☒ 5

Video Explanation: ▼

Explanation: ▼

If the maximum marks that can be scored in the four semesters are 100p, 100q, 100r and 100s respectively,using the information given in the graph we get the following:

	A	B	C	D	E	Maximum
Semester1	50p	60p	55p	65p	70p	100p
Semester2	55q	65q	60q	70q	50q	100q
Semester3	65r	60r	55r	50r	45r	100r
Semester4	65s	60s	50s	70s	55s	100s

Using point 5, exactly two students scored more than 800 marks in Semester 2. Those two students must have been B and D. Therefore, $65q > 800$ or $q > 12.3$. Therefore, $q \geq 13$ and the maximum possible marks that can be scored in Semester 2 can be at least 1300. If $q = 14$, the maximum possible marks that can be scored in Semester 2 will be 1400 and in that case, in addition to B and D, student C will also score more than 800 marks. Therefore, **$q = 13$ is the only possible value.**

Using point 6, exactly three students scored more than 1000 marks in Semester 4. Those three students must have been A, B and D. Therefore, $60s > 1000$ or $s > 16.67$. Therefore, $s \geq 17$ and the maximum possible points that can be scored in Semester 4 can be at least 1700. If $s = 17$ or 18, we have exactly three students who scored more than 1000 marks. However, if $s = 19$, the number of students who scored more than 1000 marks is more than 3. Therefore **$s = 17$ or 18 .**

So far we have the following:

	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	715	845	780	910	650	1300
Semester 3	65r	60r	55r	50r	45r	100r
Semester 4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

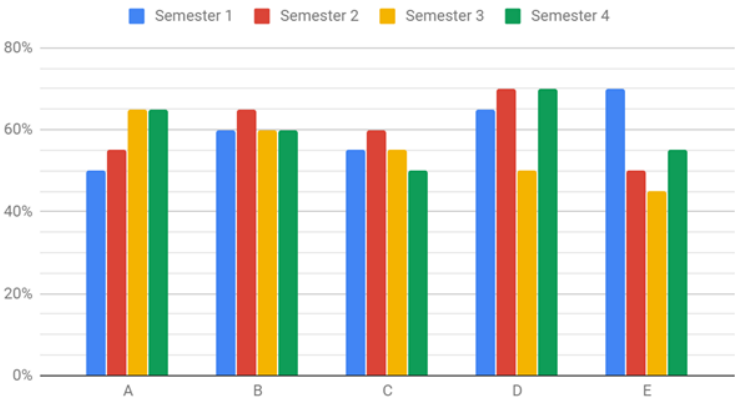
Using point 1, A scored equal marks in two semesters. From the table, we can see that those two semesters can be either (1 & 2) or (1 & 3) or (1 & 4) or (2 & 3) or (3 & 4). If $50p = 65r$, p is multiple of 13 and r is multiple of 10. As $q = 13$, $p \neq 13$. p can be 26, 39 and so on. Therefore, r can be 20, 30 and so on. But for these values of p and r we do not find any combination that satisfies point 4. In order to ensure that the maximum possible marks that can be scored in all the semesters are different multiples of 100, the two semesters in which A scored equal marks must be semesters 2 & 3 or $65r = 715$ or $r = 11$. Therefore, so far we have the following:

	A	B	C	Change Section here		
Semester1	50p	60p	55p			
Semester2	715	845	780	910	650	1300
Semester3	715	660	605	550	495	1100
Semester4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

Refer to the data below and answer the questions that follow.

The following graph shows the performance of five students, named A, B, C, D and E of Imperial College of Engineering, Delhi in four semester exams.

Performance of five students in four semesters



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

Additionally, the following points are known:

1. A scored equal marks in two of the four semesters.
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3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

From point 2, the difference in the marks scored by B in two of the four semesters was 120. The difference between 60p and 845 cannot be 120.
Therefore, $60p = 540$ or 780 or 900 or 1140 or 960 or 1200 . In order to ensure that the marks scored in Semester 2 is a unique multiple of 100, we have, $p = 9$ or 15 or 19 or 16 or 20 . Therefore, the maximum marks that can be scored in Semester 1 can be 900 or 1500 or 1600 or 1900 or 2000 .

From point 3, the difference in the marks scored by C in two of the four semesters was 70. One possibility is that C scored 850 in Semester 4 and those two semesters are Semester 2 and 4. Let us evaluate other possibility that one of those two semesters is Semester 1. We have seen earlier, $p = 9$ or 15 or 16 or 19 or 20 . Therefore the marks scored by C in Semester 1 can be 495 or 825 or 880 or 1045 or 1100 . In that case, the difference between the marks in Semester 1 and other semesters cannot be 70.

From point 4, the difference in the marks scored by E in two semesters was 20. In order to ensure that the maximum marks that can be scored in the four semesters are different multiples of 100, this statement can be fulfilled only if E scored 630 in Semester 1 and $p = 9$.

Therefore, so far we have the following:

	A	B	C	D	E	Total
Semester1	450	540	495	585	630	2700
Semester2	715	845	780	910	650	3900
Semester3	715	660	605	550	495	3025
Semester4	1105	1020	850	1190	935	5100
Total	2985	3065	2730	3235	2710	

Hence, [4].

Correct Answer:

Time taken by you: 21 secs

Avg Time taken by all students: 405 secs

Your Attempt: Correct

% Students got it correct: 68 %

2) How many marks did C score in Semester 2?

- ☐ 845
- ☒ 780 ✓
- ☐ 910
- ☐ 650

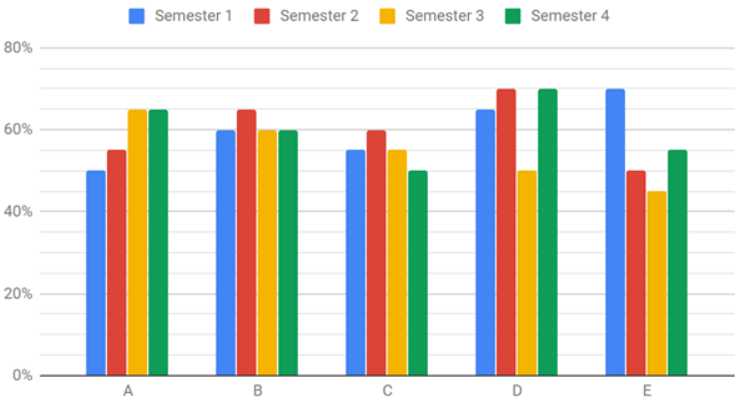
Video Explanation:

Explanation:

Refer to the data below and answer the questions that follow.

The following graph shows the performance of five students, named A, B, C, D and E of Imperial College of Engineering, Delhi in four semester exams.

Performance of five students in four semesters



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

Additionally, the following points are known:

1. A scored equal marks in two of the four semesters.
2. The difference in the marks scored by B in two of the four semesters was 120.
3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

	A	B	C	D	E	Maximum
Semester1	50p	60p	55p	65p	70p	100p
Semester2	55q	65q	60q	70q	50q	100q
Semester3	65r	60r	55r	50r	45r	100r
Semester4	65s	60s	50s	70s	55s	100s

Using point 5, exactly two students scored more than 800 marks in Semester 2. Those two students must have been B and D. Therefore, $65q > 800$ or $q > 12.3$. Therefore, $q \geq 13$ and the maximum possible marks that can be scored in Semester 2 can be at least 1300. If $q = 14$, the maximum possible marks that can be scored in Semester 2 will be 1400 and in that case, in addition to B and D, student C will also score more than 800 marks. Therefore, **q = 13 is the only possible value.**

Using point 6, exactly three students scored more than 1000 marks in Semester 4. Those three students must have been A, B and D. Therefore, $60s > 1000$ or $s > 16.67$. Therefore, $s \geq 17$ and the maximum possible points that can be scored in Semester 4 can be at least 1700. If $s = 17$ or 18, we have exactly three students who scored more than 1000 marks. However, if $s = 19$, the number of students who scored more than 1000 marks is more than 3. Therefore **s = 17 or 18.**

So far we have the following:

	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	715	845	780	910	650	1300
Semester 3	65r	60r	55r	50r	45r	100r
Semester 4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

Using point 1, A scored equal marks in two semesters. From the table, we can see that those two semesters can be either (1 & 2) or (1 & 3) or (1 & 4) or (2 & 3) or (3 & 4). If $50p = 65r$, p is multiple of 13 and r is multiple of 10. As $q = 13$, $p \neq 13$. p can be 26, 39 and so on. Therefore, r can be 20, 30 and so on. But for these values of p and r we do not find any combination that satisfies point 4. In order to ensure that the maximum possible marks that can be scored in all the semesters are different multiples of 100, the two semesters in which A scored equal marks must be semesters 2 & 3 or $65r = 715$ or $r = 11$.

Therefore, so far we have the following:

	A	B	C	D	E	Maximum
Semester1	50p	60p	55p	65p	70p	100p
Semester2	715	845	780	910	650	1300
Semester3	715	660	605	550	495	1100
Semester4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

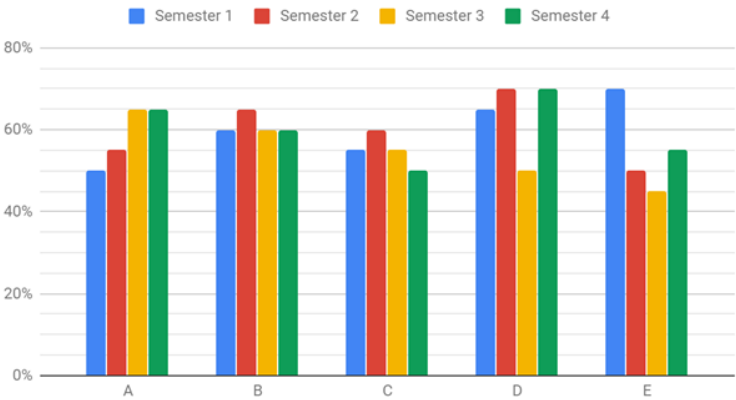
From point 2, the difference in the marks scored by B in two of the four semesters was 120. The difference between 60p and 845 cannot be 120. Therefore, $60p = 540$ or 780 or 900 or 1140 or 960 or 1200. In order to ensure that the marks scored in Semester 2 is a unique multiple of 100, we have, $p = 9$ or 15 or 19 or 16 or 20. Therefore, the maximum marks that can be scored in Semester 1 can be 900 or 1500 or 1600 or 1900 or 2000.

From point 3, the difference in the marks scored by C in two of the four semesters was 70. One possibility is that C scored 850 in Semester 4 and those two semesters are Semester 2 and 4. Let us evaluate other possibility that one of those two semesters is Semester 1. We have seen earlier, $p = 9$ or 15 or 16 or 19 or 20. Therefore the marks scored by C in Semester 1 can be 495 or 825 or 880 or 1045 or 1100. In that case, the difference between the marks in Semester 1 and other semesters cannot be 70.

Refer to the data below and answer the questions that follow.

The following graph shows the performance of five students, named A, B, C, D and E of Imperial College of Engineering, Delhi in four semester exams.

Performance of five students in four semesters



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

Additionally, the following points are known:

1. A scored equal marks in two of the four semesters.
2. The difference in the marks scored by B in two of the four semesters was 120.
3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

From point 4, the difference in the marks scored by E in two of the semesters was 20. In order to ensure that the maximum marks that can be scored in the four semesters are different multiples of 100, this statement can be fulfilled only if E scored 630 in Semester 1 and $p = 9$.

Therefore, so far we have the following:

	A	B	C	D	E	Total
Semester 1	450	540	495	585	630	2700
Semester 2	715	845	780	910	650	3900
Semester 3	715	660	605	550	495	3025
Semester 4	1105	1020	850	1190	935	5100
Total	2985	3065	2730	3235	2710	

Hence, [2].

Correct Answer:

Time taken by you: 570 secs

Avg Time taken by all students: 285 secs

Your Attempt: Correct

% Students got it correct: 88 %

3) What was the maximum sum of the marks scored by any of the given five students in the four semesters?

Enter your response (as an integer) using the virtual keyboard in the box provided below.

Video Explanation:

Explanation:

If the maximum marks that can be scored in the four semesters are 100p, 100q, 100r and 100s respectively,using the information given in the graph we get the following:

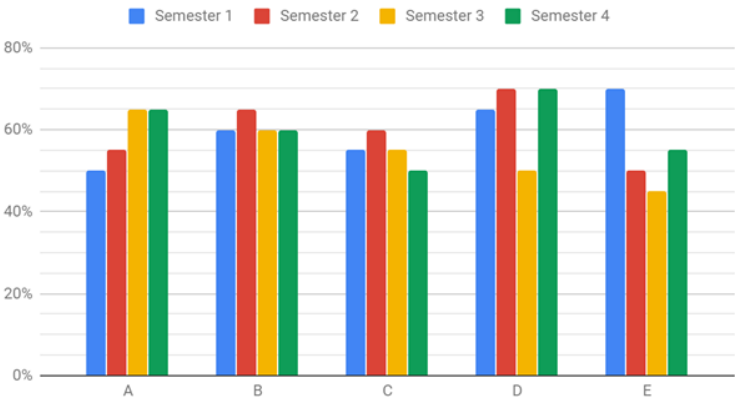
	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	55q	65q	60q	70q	50q	100q
Semester 3	65r	60r	55r	50r	45r	100r
Semester 4	65s	60s	50s	70s	55s	100s

Using point 5, exactly two students scored more than 800 marks in Semester 2. Those two students must have been B and D. Therefore, $65q > 800$ or $q > 12.3$. Therefore, $q \geq 13$ and the maximum possible marks that can be scored in Semester 2 can be at least 1300. If $q = 14$, the maximum possible marks that can be scored in Semester 2 will be 1400 and in that case, in addition to B and D, student C will also score more than 800 marks. Therefore, **q = 13 is the only possible value.**

Refer to the data below and answer the questions that follow.

The following graph shows the performance of five students, named A, B, C, D and E of Imperial College of Engineering, Delhi in four semester exams.

Performance of five students in four semesters



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

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4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

Using point 6, exactly three students scored more than 1000 marks in Semester 4. Those three students are A, B, and D. Therefore, $60s > 1000$ or $s > 16.67$. Therefore, $s \geq 17$ and the maximum possible points that can be scored in Semester 4 can be at least 1700. If $s = 17$ or 18 , we have exactly three students who scored more than 1000 marks. However, if $s = 19$, the number of students who scored more than 1000 marks is more than 3. Therefore **$s = 17$ or 18** .

So far we have the following:

	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	715	845	780	910	650	1300
Semester 3	65r	60r	55r	50r	45r	100r
Semester 4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

Using point 1, A scored equal marks in two semesters. From the table, we can see that those two semesters can be either (1 & 2) or (1 & 3) or (1 & 4) or (2 & 3) or (3 & 4). If $50p = 65r$, p is multiple of 13 and r is multiple of 10. As $q = 13$, $p \neq 13$. p can be 26, 39 and so on. Therefore, r can be 20, 30 and so on. But for these values of p and r we do not find any combination that satisfies point 4. In order to ensure that the maximum possible marks that can be scored in all the semesters are different multiples of 100, the two semesters in which A scored equal marks must be semesters 2 & 3 or $65r = 715$ or $r = 11$.

Therefore, so far we have the following:

	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	715	845	780	910	650	1300
Semester 3	715	660	605	550	495	1100
Semester 4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

From point 2, the difference in the marks scored by B in two of the four semesters was 120. The difference between 60p and 845 cannot be 120.
Therefore, $60p = 540$ or 780 or 900 or 1140 or 960 or 1200 . In order to ensure that the marks scored in Semester 2 is a unique multiple of 100, we have, $p = 9$ or 15 or 19 or 16 or 20 . Therefore, the maximum marks that can be scored in Semester 1 can be 900 or 1500 or 1600 or 1900 or 2000.

From point 3, the difference in the marks scored by C in two of the four semesters was 70. One possibility is that C scored 850 in Semester 4 and those two semesters are Semester 2 and 4. Let us evaluate other possibility that one of those two semesters is Semester 1. We have seen earlier, $p = 9$ or 15 or 16 or 19 or 20 . Therefore the marks scored by C in Semester 1 can be 495 or 825 or 880 or 1045 or 1100. In that case, the difference between the marks in Semester 1 and other semesters cannot be 70.

From point 4, the difference in the marks scored by E in two semesters was 20. In order to ensure that the maximum marks that can be scored in the four semesters are different multiples of 100, this statement can be fulfilled only if E scored 630 in Semester 1 and $p = 9$.

Therefore, so far we have the following:

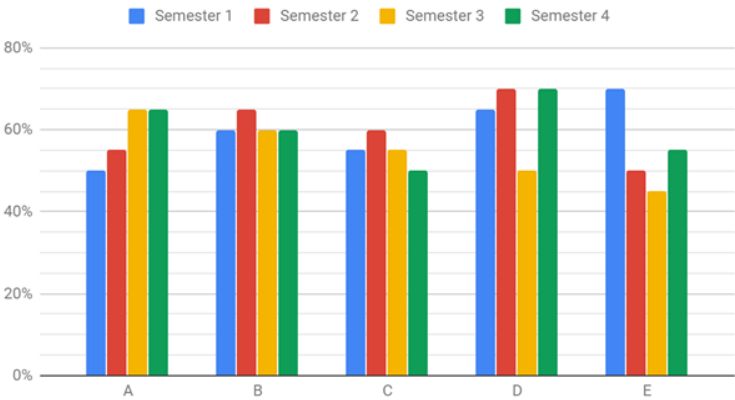
	A	B	C	D	E	Total
Semester 1	450	540	495	585	630	2700
Semester 2	715	845	780	910	650	3900
Semester 3	715	660	605	550	495	3025
Semester 4	1105	1020	850	1190	935	5100
Total	2985	3065	2730	3235	2710	

Therefore, the required answer is 3235.

Refer to the data below and answer the questions that follow.

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Performance of five students in four semesters



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

Additionally, the following points are known:

1. A scored equal marks in two of the four semesters.
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3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

Time taken by you: 0 secs

Avg Time taken by all students: 19 secs

Your Attempt: Skipped

% Students got it correct: 12 %

4) What was the sum of the marks scored by the given five students in Semester 3?

Enter your response (as an integer) using the virtual keyboard in the box provided below.

3025

Video Explanation:

Explanation:

If the maximum marks that can be scored in the four semesters are 100p, 100q, 100r and 100s respectively,using the information given in the graph we get the following:

	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	55q	65q	60q	70q	50q	100q
Semester 3	65r	60r	55r	50r	45r	100r
Semester 4	65s	60s	50s	70s	55s	100s

Using point 5, exactly two students scored more than 800 marks in Semester 2. Those two students must have been B and D. Therefore, $65q > 800$ or $q > 12.3$. Therefore, $q \geq 13$ and the maximum possible marks that can be scored in Semester 2 can be at least 1300. If $q = 14$, the maximum possible marks that can be scored in Semester 2 will be 1400 and in that case, in addition to B and D, student C will also score more than 800 marks. Therefore, **q = 13 is the only possible value.**

Using point 6, exactly three students scored more than 1000 marks in Semester 4. Those three students must have been A, B and D. Therefore, $60s > 1000$ or $s > 16.67$. Therefore, $s \geq 17$ and the maximum possible points that can be scored in Semester 4 can be at least 1700. If $s = 17$ or 18, we have exactly three students who scored more than 1000 marks. However, if $s = 19$, the number of students who scored more than 1000 marks is more than 3. Therefore **s = 17 or 18.**

So far we have the following:

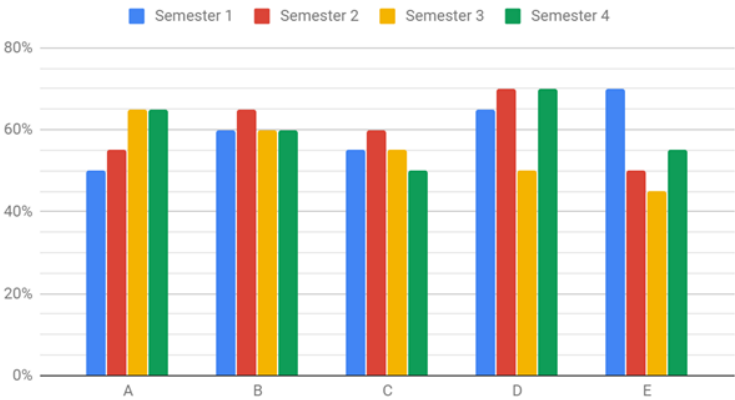
	A	B	C	D	E	Maximum
Semester 1	50p	60p	55p	65p	70p	100p
Semester 2	715	845	780	910	650	1300
Semester 3	65r	60r	55r	50r	45r	100r
Semester 4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

Using point 1, A scored equal marks in two semesters. From the table, we can see that those two semesters can be either (1 & 2) or (1 & 3) or (1 & 4) or (2 & 3) or (3 & 4). If $50p = 65r$, p is multiple of 13 and r is multiple of 10. As $q = 13$, $p \neq 13$. p can be 26, 39 and so on. Therefore, r can be 20, 30 and so on. But for these values of p and r we do not find any combination that satisfies point

Refer to the data below and answer the questions that follow.

The following graph shows the performance of five students, named A, B, C, D and E of Imperial College of Engineering, Delhi in four semester exams.

Performance of five students in four semesters



(For example, A scored 50% in Semester 1, B scored 65% in Semester 2 and so on).
The maximum marks that could be scored in each of the four semesters were different multiples of 100.

Additionally, the following points are known:

1. A scored equal marks in two of the four semesters.
2. The difference in the marks scored by B in two of the four semesters was 120.
3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

4. In order to ensure that the maximum possible marks that can be scored in all the semesters are different, the maximum marks in two semesters in which A scored equal marks must be semesters 2 & 3 or $65r = 715$ or $r = 11$.
Therefore, so far we have the following:

	A	B	C	D	E	Maximum
Semester1	50p	60p	55p	65p	70p	100p
Semester2	715	845	780	910	650	1300
Semester3	715	660	605	550	495	1100
Semester4	1105 or 1170	1020 or 1080	850 or 900	1190 or 1260	935 or 990	1700 or 1800

From point 2, the difference in the marks scored by B in two of the four semesters was 120. The difference between 60p and 845 cannot be 120.
Therefore, $60p = 540$ or 780 or 900 or 1140 or 960 or 1200 . In order to ensure that the marks scored in Semester 2 is a unique multiple of 100, we have, $p = 9$ or 15 or 19 or 16 or 20 . Therefore, the maximum marks that can be scored in Semester 1 can be 900 or 1500 or 1600 or 1900 or 2000 .

From point 3, the difference in the marks scored by C in two of the four semesters was 70. One possibility is that C scored 850 in Semester 4 and those two semesters are Semester 2 and 4. Let us evaluate other possibility that one of those two semesters is Semester 1. We have seen earlier, $p = 9$ or 15 or 16 or 19 or 20 . Therefore the marks scored by C in Semester 1 can be 495 or 825 or 880 or 1045 or 1100 . In that case, the difference between the marks in Semester 1 and other semesters cannot be 70.

From point 4, the difference in the marks scored by E in two semesters was 20. In order to ensure that the maximum marks that can be scored in the four semesters are different multiples of 100, this statement can be fulfilled only if E scored 630 in Semester 1 and $p = 9$.

Therefore, so far we have the following:

	A	B	C	D	E	Total
Semester1	450	540	495	585	630	2700
Semester2	715	845	780	910	650	3900
Semester3	715	660	605	550	495	3025
Semester4	1105	1020	850	1190	935	5100
Total	2985	3065	2730	3235	2710	

Therefore, the required answer is 3025.

Correct Answer:

Time taken by you: 44 secs

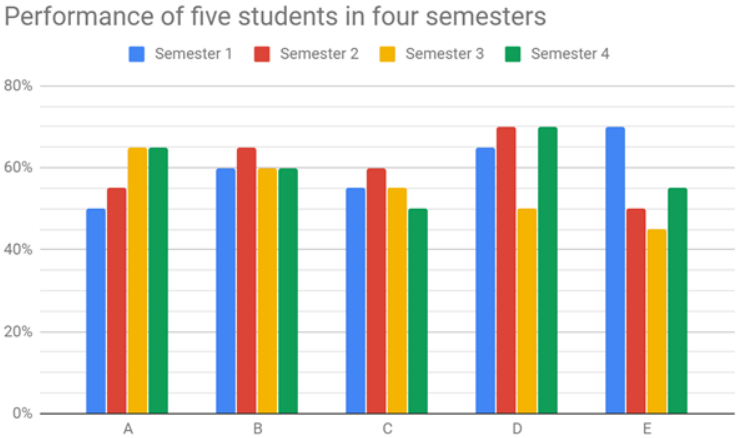
Avg Time taken by all students: 30 secs

Your Attempt: Correct

% Students got it correct: 25 %

Refer to the data below and answer the questions that follow.

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3. The difference in the marks scored by C in two of the four semesters was 70.
4. The difference in the marks scored by E in two of the four semesters was 20.
5. Exactly two students scored more than 800 marks in Semester 2.
6. Exactly three students scored more than 1000 marks in Semester 4.

Refer to the data below and answer the questions that follow.

Three online homestay reservation websites X, Y and Z have 3 star, 4 star and 5 star homestays listed. The details of number of different category homestays are given below:

- 1. One homestay can be listed on exactly one website.
- 2. The total number of homestays listed on the all three websites taken together is 360.
- 3. The total number of 4 star home stays is twice the total number of 3 star homestays on all the three websites taken together similarly the total number of 5 star homestays is thrice the total number of 4 star homestays in all the three websites together.
- 4. On website X, out of total 120 homestays, 85 homestays are 5 star homestays.
- 5. On website Y, half of the total listed homestays are 5 star homestays. Also the number of 3 star homestays is same as number of 4 star homestays listed on website Y.
- 6. The number of 3 star homestays listed on website Z is equal to the number of 3 star homestays listed on website X.
- 7. The difference between the number of 3 star homestays listed on website Z and the number of 4 star homestays listed on website X is 15.

1) How many 3 star homestays are listed on website X?

- ☒ 10
- ☐ 20
- ☐ 40
- ☐ 80

Video Explanation:

Explanation:

Total number of homestays = 360.
Using point 3 : Let the total number of 3 star homestays be ‘a’, then the total number of 4 star homestays = (2a) and total number of 5 star homestays = (6a)
Thus, (a + 2a + 6a) = 360
Solving this, we get a = 40.
Therefore, 2a = 80 and 6a = 240

Website X: Let the number of 3 star homestays be ‘e’. Therefore using point 4, the number of 4 star homestays = 120 – (85 + e) = (35 – e)

Website Y: Let the number of 3 star homestays be ‘d’. Therefore, the number of 4 star homestays = d, and the number of 5 star homestays = 2d.

Website Z: Using point 6, the number of 3 star homestays = e.
∴ The number of 4 star homestays = 80 – [(35 – e) + d] = (45 + e – d)
& The number of 4 star homestays = 240 – (85 + 2d) = (155 – 2d)

Thus, we have:

	X	Y	Z	Total
3 star homestays	e	d	e	40
4 star homestays	(35 – e)	d	(45 + e – d)	80
5 star homestays	85	2d	(155 – 2d)	240
Total	120	4d	(200 + 2e – 3d)	360

Using point 7, |e – (35 – e)| = 15
∴ e – 35 + e = 15 or 35 – e – e = 15
∴ e = 25 or e = 10

As 40 = 2e + d, e cannot be 25.
Therefore, e = 10 and hence d = 20

Thus, we have

	X	Y	Z	Total
3 star homestays	10	20	10	40
4 star homestays	25	20	35	80
5 star homestays	85	40	115	240
Total	120	80	160	360

The number of 3 star homestays are listed on website X = 10
Hence, [1].

Correct Answer:

Refer to the data below and answer the questions that follow.

Three online homestay reservation websites X, Y and Z have 3 star, 4 star and 5 star homestays listed. The details of number of different category homestays are given below:

- 1. One homestay can be listed on exactly one website.
- 2. The total number of homestays listed on the all three websites taken together is 360.
- 3. The total number of 4 star home stays is twice the total number of 3 star homestays on all the three websites taken together similarly the total number of 5 star homestays is thrice the total number of 4 star homestays in all the three websites together.
- 4. On website X, out of total 120 homestays, 85 homestays are 5 star homestays.
- 5. On website Y, half of the total listed homestays are 5 star homestays. Also the number of 3 star homestays is same as number of 4 star homestays listed on website Y.
- 6. The number of 3 star homestays listed on website Z is equal to the number of 3 star homestays listed on website X.
- 7. The difference between the number of 3 star homestays listed on website Z and the number of 4 star homestays listed on website X is 15.

Avg Time taken by all students: 600 secs

Your Attempt: Correct

% Students got it correct: 94 %

2) What is the total number of homestays listed on website Y? —

- ☐ 40
- ☒ 80 ✓
- ☐ 120
- ☐ 240

Video Explanation: ▼

Refer to the data below and answer the questions that follow.

Three online homestay reservation websites X, Y and Z have 3 star, 4 star and 5 star homestays listed. The details of number of different category homestays are given below:

1. One homestay can be listed on exactly one website.
2. The total number of homestays listed on the all three websites taken together is 360.
3. The total number of 4 star home stays is twice the total number of 3 star homestays on all the three websites taken together similarly the total number of 5 star homestays is thrice the total number of 4 star homestays in all the three websites together.
4. On website X, out of total 120 homestays, 85 homestays are 5 star homestays.
5. On website Y, half of the total listed homestays are 5 star homestays. Also the number of 3 star homestays is same as number of 4 star homestays listed on website Y.
6. The number of 3 star homestays listed on website Z is equal to the number of 3 star homestays listed on website X.
7. The difference between the number of 3 star homestays listed on website Z and the number of 4 star homestays listed on website X is 15.

Total number of homestays = 360.
Using point 3 : Let the total number of 3 star homestays be 'a', then the total number of 4 star homestays = (2a) and total number of 5 star homestays = (6a)
Thus, (a + 2a + 6a) = 360
Solving this, we get a = 40.
Therefore, 2a = 80 and 6a = 240

Website X: Let the number of 3 star homestays be 'e'. Therefore using point 4, the number of 4 star homestays = 120 – (85 + e) = (35 – e)

Website Y: Let the number of 3 star homestays be 'd'. Therefore, the number of 4 star homestays = d, and the number of 5 star homestays = 2d.

Website Z: Using point 6, the number of 3 star homestays = e.
∴ The number of 4 star homestays = 80 – [(35 – e) + d] = (45 + e – d)
& The number of 4 star homestays = 240 – (85 + 2d) = (155 – 2d)

Thus, we have:

	X	Y	Z	Total
3 star homestays	e	d	e	40
4 star homestays	(35 – e)	d	(45 + e – d)	80
5 star homestays	85	2d	(155 – 2d)	240
Total	120	4d	(200 + 2e – 3d)	360

Using point 7, |e – (35 – e)| = 15
∴ e – 35 + e = 15 or 35 – e – e = 15
∴ e = 25 or e = 10

As 40 = 2e + d, e cannot be 25.
Therefore, e = 10 and hence d = 20

Thus, we have

	X	Y	Z	Total
3 star homestays	10	20	10	40
4 star homestays	25	20	35	80
5 star homestays	85	40	115	240
Total	120	80	160	360

In all, 20 + 20 + 40 = 80 homestays are listed on website Y. Hence, [2].

Correct Answer:

Time taken by you: 9 secs

Avg Time taken by all students: 84 secs

Your Attempt: Correct

% Students got it correct: 93 %

3) What is the difference between the number of 5 star homestays listed on website Y and the number of 5 star homestays listed on website Z?

Refer to the data below and answer the questions that follow.

Three online homestay reservation websites X, Y and Z have 3 star, 4 star and 5 star homestays listed. The details of number of different category homestays are given below:

- 1. One homestay can be listed on exactly one website.
- 2. The total number of homestays listed on the all three websites taken together is 360.
- 3. The total number of 4 star home stays is twice the total number of 3 star homestays on all the three websites taken together similarly the total number of 5 star homestays is thrice the total number of 4 star homestays in all the three websites together.
- 4. On website X, out of total 120 homestays, 85 homestays are 5 star homestays.
- 5. On website Y, half of the total listed homestays are 5 star homestays. Also the number of 3 star homestays is same as number of 4 star homestays listed on website Y.
- 6. The number of 3 star homestays listed on website Z is equal to the number of 3 star homestays listed on website X.
- 7. The difference between the number of 3 star homestays listed on website Z and the number of 4 star homestays listed on website X is 15.

- ☐ 20
- ☐ 30
- ☐ 45
- ☒ 75 ✓

Video Explanation: ▼

Explanation: ▼

Total number of homestays = 360.
Using point 3 : Let the total number of 3 star homestays be ‘a’, then the total number of 4 star homestays = (2a) and total number of 5 star homestays = (6a)
Thus, (a + 2a + 6a) = 360
Solving this, we get a = 40.
Therefore, 2a = 80 and 6a = 240

Website X: Let the number of 3 star homestays be ‘e’. Therefore using point 4, the number of 4 star homestays = 120 – (85 + e) = (35 – e)

Website Y: Let the number of 3 star homestays be ‘d’. Therefore, the number of 4 star homestays = d, and the number of 5 star homestays = 2d.

Website Z: Using point 6, the number of 3 star homestays = e.
∴ The number of 4 star homestays = 80 – [(35 – e) + d] = (45 + e – d)
& The number of 4 star homestays = 240 – (85 + 2d) = (155 – 2d)

Thus, we have:

	X	Y	Z	Total
3 star homestays	e	d	e	40
4 star homestays	(35 – e)	d	(45 + e – d)	80
5 star homestays	85	2d	(155 – 2d)	240
Total	120	4d	(200 + 2e – 3d)	360

Using point 7, |e – (35 – e)| = 15
∴ e – 35 + e = 15 or 35 – e – e = 15
∴ e = 25 or e = 10

As 40 = 2e + d, e cannot be 25.
Therefore, e = 10 and hence d = 20

Thus, we have

	X	Y	Z	Total
3 star homestays	10	20	10	40
4 star homestays	25	20	35	80
5 star homestays	85	40	115	240
Total	120	80	160	360

The required difference = 115 – 40 = 75.
Hence, [4].

Correct Answer: ▼

Time taken by you: 18 secs

Avg Time taken by all students: 43 secs

Your Attempt: Correct

Refer to the data below and answer the questions that follow.

Three online homestay reservation websites X, Y and Z have 3 star, 4 star and 5 star homestays listed. The details of number of different category homestays are given below:

1. One homestay can be listed on exactly one website.
2. The total number of homestays listed on the all three websites taken together is 360.
3. The total number of 4 star home stays is twice the total number of 3 star homestays on all the three websites taken together similarly the total number of 5 star homestays is thrice the total number of 4 star homestays in all the three websites together.
4. On website X, out of total 120 homestays, 85 homestays are 5 star homestays.
5. On website Y, half of the total listed homestays are 5 star homestays. Also the number of 3 star homestays is same as number of 4 star homestays listed on website Y.
6. The number of 3 star homestays listed on website Z is equal to the number of 3 star homestays listed on website X.
7. The difference between the number of 3 star homestays listed on website Z and the number of 4 star homestays listed on website X is 15.

4) How many 4 star homestays are listed on website Z?

☐

20

☒

35

☐

40

☐

85

Video Explanation:

▼

Explanation:

▼

Total number of homestays = 360.
Using point 3 : Let the total number of 3 star homestays be ‘a’, then the total number of 4 star homestays = (2a) and total number of 5 star homestays = (6a)
Thus, (a + 2a + 6a) = 360
Solving this, we get a = 40.
Therefore, 2a = 80 and 6a = 240

Website X: Let the number of 3 star homestays be ‘e’. Therefore using point 4, the number of 4 star homestays = 120 – (85 + e) = (35 – e)

Website Y: Let the number of 3 star homestays be ‘d’. Therefore, the number of 4 star homestays = d, and the number of 5 star homestays = 2d.

Website Z: Using point 6, the number of 3 star homestays = e.
∴ The number of 4 star homestays = 80 – [(35 – e) + d] = (45 + e – d)
& The number of 4 star homestays = 240 – (85 + 2d) = (155 – 2d)

Thus, we have:

	X	Y	Z	Total
3 star homestays	e	d	e	40
4 star homestays	(35 – e)	d	(45 + e – d)	80
5 star homestays	85	2d	(155 – 2d)	240
Total	120	4d	(200 + 2e – 3d)	360

Using point 7, |e – (35 – e)| = 15
∴ e – 35 + e = 15 or 35 – e – e = 15
∴ e = 25 or e = 10

As 40 = 2e + d, e cannot be 25.
Therefore, e = 10 and hence d = 20

Thus, we have

	X	Y	Z	Total
3 star homestays	10	20	10	40
4 star homestays	25	20	35	80
5 star homestays	85	40	115	240
Total	120	80	160	360

The number of 4 star homestays listed on website Z = 35
Hence, [2].

Correct Answer:

▼

Refer to the data below and answer the questions that follow.

Three online homestay reservation websites X, Y and Z have 3 star, 4 star and 5 star homestays listed. The details of number of different category homestays are given below:

1. One homestay can be listed on exactly one website.
2. The total number of homestays listed on the all three websites taken together is 360.
3. The total number of 4 star home stays is twice the total number of 3 star homestays on all the three websites taken together similarly the total number of 5 star homestays is thrice the total number of 4 star homestays in all the three websites together.
4. On website X, out of total 120 homestays, 85 homestays are 5 star homestays.
5. On website Y, half of the total listed homestays are 5 star homestays. Also the number of 3 star homestays is same as number of 4 star homestays listed on website Y.
6. The number of 3 star homestays listed on website Z is equal to the number of 3 star homestays listed on website X.
7. The difference between the number of 3 star homestays listed on website Z and the number of 4 star homestays listed on website X is 15.

Avg Time taken by all students: 26 secs

Your Attempt: Correct

% Students got it correct: 96 %

Loading...

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

1) What was the sum of the marks scored by the five students in English?

- ☐ 67
- ☐ 70
- ☐ 72
- ☐ 73

Video Explanation:

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

The marks scored by the students can be among 10, 11, 12, 15, 16, 17, 18 and 19. So top 3 scorers must have scored at least 12 marks. As Shilpa scored 7 marks more in Statistics than Swati scored in Geometry, Swati's score in Geometry must be 12 and Shilpa's score in Statistics must be 19.

The two lowest possible scores can be either 10 or 11 in Algebra, Geometry and Economics. Similarly the two lowest scores of Gauri, Swati and Varsha can be either 10 or 11.

	Algebra	Geometry	English	Economics	Statistics
Gauri	10/11			12	11/10
Shilpa	18	10/11		10/11	19
Sheetal		10/11	16		12
Swati	11/10	12	10/11	17	
Varsha	12	15	10/11	11/10	

Now, let Varsha's marks in Statistics be 'a', her total marks = (48 + a). Using point 2, total marks in Algebra = (54 + a). Thus, Sheetal's marks in Algebra = (a + 3). Varsha scored more than 15 in Statistics, therefore, a = 16; a + 3 = 19. Total marks scored in Algebra = 70.

Again using point 2, total marks scored by Sheetal = 70 + 2 = 72. Sheetal's marks in Geometry and Economics = 72 – 19 – 16 – 12 = 25. The only possible combination is 10 + 15. Thus, Sheetal's marks in Economics = 15. Now the total marks in Economics = 12 + 10 + 11 + 15 + 17 = 65. In Geometry, Sheetal and Shilpa scored 10 and 11 marks respectively.

So far we have:

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11			12	10	
Shilpa	18	11		10	19	
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17		
Varsha	12	15	10	11	16	64
Total	70			65		

Swati's marks in Statistics can be either 15 or 18. If it is 15, then total marks scored in Statistics = 72. If it is 18, then total marks scored in Statistics = 75. Using point 3, total marks scored in English is same as total marks scored in Statistics. If the total marks scored in English are 75, then Shilpa and Gauri both must have scored 19 marks each, which is invalid. Thus, total marks scored in English and Statistics = 72. Swati scored 15 marks in Statistics. Now, total marks of Gauri and Shilpa in English = 35. Possible combination of 35 : (19 + 16) not possible; (18 + 17) possible. Thus, in English, Gauri scored 18 marks and Shilpa scored 17 marks.

Total marks scored in Geometry must be more than 65. The total marks of all except Gauri in Geometry = 11 + 10 + 12 + 15 = 48. Since Gauri got 18 marks in English, she must have got 19 marks in Geometry.

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11	19	18	12	10	70
Shilpa	18	11	17	10	19	75
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17	15	65
Varsha	12	15	10	11	16	64
Total	70	67	72	65	72	

The sum of the marks scored by the five students in English = 72
Hence, [3].

Correct Answer: ▼

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

Your Attempt: Skipped

% Students got it correct: 50 %

2) Which of the following options represents the correct order of the sum of the scores of the five students in all the subjects in an increasing order?

- ☐ Swati < Varsha < Sheetal < Gauri < Shilpa
- ☐ Varsha < Swati < Sheetal < Gauri < Shilpa
- ☐ Varsha < Swati < Gauri < Sheetal < Shilpa
- ☐ Cannot be determined

Video Explanation:



Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

The marks scored by the students can be among 10, 11, 12, 15, 16, 17, 18 and 19. So top 3 scorers must have scored at least 12 marks. As Shilpa scored 7 marks more in Statistics than Swati scored in Geometry, Swati's score in Geometry must be 12 and Shilpa's score in Statistics must be 19.

The two lowest possible scores can be either 10 or 11 in Algebra, Geometry and Economics. Similarly the two lowest scores of Gauri, Swati and Varsha can be either 10 or 11.

	Algebra	Geometry	English	Economics	Statistics
Gauri	10/11			12	11/10
Shilpa	18	10/11		10/11	19
Sheetal		10/11	16		12
Swati	11/10	12	10/11	17	
Varsha	12	15	10/11	11/10	

Now, let Varsha's marks in Statistics be 'a', her total marks = (48 + a). Using point 2, total marks in Algebra = (54 + a). Thus, Sheetal's marks in Algebra = (a + 3). Varsha scored more than 15 in Statistics, therefore, a = 16; a + 3 = 19. Total marks scored in Algebra = 70.

Again using point 2, total marks scored by Sheetal = 70 + 2 = 72. Sheetal's marks in Geometry and Economics = 72 – 19 – 16 – 12 = 25. The only possible combination is 10 + 15. Thus, Sheetal's marks in Economics = 15. Now the total marks in Economics = 12 + 10 + 11 + 15 + 17 = 65. In Geometry, Sheetal and Shilpa scored 10 and 11 marks respectively.

So far we have:

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11			12	10	
Shilpa	18	11		10	19	
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17		
Varsha	12	15	10	11	16	64
Total	70			65		

Swati's marks in Statistics can be either 15 or 18. If it is 15, then total marks scored in Statistics = 72. If it is 18, then total marks scored in Statistics = 75. Using point 3, total marks scored in English is same as total marks scored in Statistics. If the total marks scored in English are 75, then Shilpa and Gauri both must have scored 19 marks each, which is invalid. Thus, total marks scored in English and Statistics = 72. Swati scored 15 marks in Statistics. Now, total marks of Gauri and Shilpa in English = 35. Possible combination of 35 : (19 + 16) not possible; (18 + 17) possible. Thus, in English, Gauri scored 18 marks and Shilpa scored 17 marks.

Total marks scored in Geometry must be more than 65. The total marks of all except Gauri in Geometry = 11 + 10 + 12 + 15 = 48. Since Gauri got 18 marks in English, she must have got 19 marks in Geometry.

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11	19	18	12	10	70
Shilpa	18	11	17	10	19	75
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17	15	65
Varsha	12	15	10	11	16	64
Total	70	67	72	65	72	

The correct order: Varsha < Swati < Gauri < Sheetal < Shilpa. Hence, [3].

Correct Answer:

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

Your Attempt: **Skipped**

% Students got it correct: **64 %**

3) What was Swati’s score in Statistics?

—

- ☐ 12
- ☐ 15
- ☐ 16
- ☐ Cannot be determined

Video Explanation:

▼

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

The marks scored by the students can be among 10, 11, 12, 15, 16, 17, 18 and 19. So top 3 scorers must have scored at least 12 marks. As Shilpa scored 7 marks more in Statistics than Swati scored in Geometry, Swati's score in Geometry must be 12 and Shilpa's score in Statistics must be 19.

The two lowest possible scores can be either 10 or 11 in Algebra, Geometry and Economics. Similarly the two lowest scores of Gauri, Swati and Varsha can be either 10 or 11.

	Algebra	Geometry	English	Economics	Statistics
Gauri	10/11			12	11/10
Shilpa	18	10/11		10/11	19
Sheetal		10/11	16		12
Swati	11/10	12	10/11	17	
Varsha	12	15	10/11	11/10	

Now, let Varsha's marks in Statistics be 'a', her total marks = (48 + a). Using point 2, total marks in Algebra = (54 + a). Thus, Sheetal's marks in Algebra = (a + 3). Varsha scored more than 15 in Statistics, therefore, a = 16; a + 3 = 19. Total marks scored in Algebra = 70.

Again using point 2, total marks scored by Sheetal = 70 + 2 = 72. Sheetal's marks in Geometry and Economics = 72 – 19 – 16 – 12 = 25. The only possible combination is 10 + 15. Thus, Sheetal's marks in Economics = 15. Now the total marks in Economics = 12 + 10 + 11 + 15 + 17 = 65. In Geometry, Sheetal and Shilpa scored 10 and 11 marks respectively.

So far we have:

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11			12	10	
Shilpa	18	11		10	19	
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17		
Varsha	12	15	10	11	16	64
Total	70			65		

Swati's marks in Statistics can be either 15 or 18. If it is 15, then total marks scored in Statistics = 72. If it is 18, then total marks scored in Statistics = 75. Using point 3, total marks scored in English is same as total marks scored in Statistics. If the total marks scored in English are 75, then Shilpa and Gauri both must have scored 19 marks each, which is invalid. Thus, total marks scored in English and Statistics = 72. Swati scored 15 marks in Statistics. Now, total marks of Gauri and Shilpa in English = 35. Possible combination of 35 : (19 + 16) not possible; (18 + 17) possible. Thus, in English, Gauri scored 18 marks and Shilpa scored 17 marks.

Total marks scored in Geometry must be more than 65. The total marks of all except Gauri in Geometry = 11 + 10 + 12 + 15 = 48. Since Gauri got 18 marks in English, she must have got 19 marks in Geometry.

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11	19	18	12	10	70
Shilpa	18	11	17	10	19	75
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17	15	65
Varsha	12	15	10	11	16	64
Total	70	67	72	65	72	

Swati scored 15 marks in Statistics. Hence, [2].

Correct Answer:

Time taken by you: 0 secs

Avg Time taken by all students: 121 secs

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

% Students got it correct: 67 %

4) As per the new norms laid by the government, the 3 subjects with the highest scores are considered for calculating the total score of a candidate. How many of the given five students would retain their ranks in the new system?

- ☐ 2
- ☐ 3
- ☐ 4
- ☐ None of these

Video Explanation:



Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
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Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

The marks scored by the students can be among 10, 11, 12, 15, 16, 17, 18 and 19. So top 3 scorers must have scored at least 12 marks. As Shilpa scored 7 marks more in Statistics than Swati scored in Geometry, Swati's score in Geometry must be 12 and Shilpa's score in Statistics must be 19.

The two lowest possible scores can be either 10 or 11 in Algebra, Geometry and Economics. Similarly the two lowest scores of Gauri, Swati and Varsha can be either 10 or 11.

	Algebra	Geometry	English	Economics	Statistics
Gauri	10/11			12	11/10
Shilpa	18	10/11		10/11	19
Sheetal		10/11	16		12
Swati	11/10	12	10/11	17	
Varsha	12	15	10/11	11/10	

Now, let Varsha's marks in Statistics be 'a', her total marks = (48 + a). Using point 2, total marks in Algebra = (54 + a). Thus, Sheetal's marks in Algebra = (a + 3). Varsha scored more than 15 in Statistics, therefore, a = 16; a + 3 = 19. Total marks scored in Algebra = 70.

Again using point 2, total marks scored by Sheetal = 70 + 2 = 72. Sheetal's marks in Geometry and Economics = 72 – 19 – 16 – 12 = 25. The only possible combination is 10 + 15. Thus, Sheetal's marks in Economics = 15. Now the total marks in Economics = 12 + 10 + 11 + 15 + 17 = 65. In Geometry, Sheetal and Shilpa scored 10 and 11 marks respectively.

So far we have:

	Algebra	Geometry	English	Economics	Statistics	Total
Gauri	11			12	10	
Shilpa	18	11		10	19	
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17		
Varsha	12	15	10	11	16	64
Total	70			65		

Swati's marks in Statistics can be either 15 or 18. If it is 15, then total marks scored in Statistics = 72. If it is 18, then total marks scored in Statistics = 75. Using point 3, total marks scored in English is same as total marks scored in Statistics. If the total marks scored in English are 75, then Shilpa and Gauri both must have scored 19 marks each, which is invalid. Thus, total marks scored in English and Statistics = 72. Swati scored 15 marks in Statistics. Now, total marks of Gauri and Shilpa in English = 35. Possible combination of 35 : (19 + 16) not possible; (18 + 17) possible. Thus, in English, Gauri scored 18 marks and Shilpa scored 17 marks.

Total marks scored in Geometry must be more than 65. The total marks of all except Gauri in Geometry = 11 + 10 + 12 + 15 = 48. Since Gauri got 18 marks in English, she must have got 19 marks in Geometry.

	Algebra	Geometry	English	Economics	Statistics	Total
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Shilpa	18	11	17	10	19	75
Sheetal	19	10	16	15	12	72
Swati	10	12	11	17	15	65
Varsha	12	15	10	11	16	64
Total	70	67	72	65	72	

As per the new system, the total scores of the five students are as follows:

Gauri: 49, Shilpa: 54, Sheetal: 50, Swati: 44, Varsha: 43.

Therefore, the new increasing order is: Varsha < Swati < Gauri < Sheetal < Shilpa.

Thus, all the five students retain their original ranks.

Hence, [4].

Refer to the data below and answer the questions that follow.

IMS international school conducted an exam of 5 subjects- Algebra, Geometry, English, Economics and Statistics. The table below gives the partial information about the marks scored by 5 students- Gauri, Shilpa, Sheetal, Swati and Varsha in each subject.

The marks scored by the students in each of the subjects were only from among 10, 11, 12, 15, 16, 17, 18 and 19. The marks scored by any student in any two subjects were not the same. Similarly, the marks scored by any two students in the same subject were not the same. The cells highlighted in yellow colour denote the top 3 scores in each subject and the top 3 scores for each student.

	Algebra	Geometry	English	Economics	Statistics
Gauri				12	
Shilpa	18				
Sheetal			16		12
Swati				17	
Varsha	12	15			

Further,

Loading...

1. Shilpa scored 7 more marks in Statistics than the marks scored by Swati in Geometry.
2. The sum of the marks scored by the five students in Algebra was more than the sum of marks scored by Varsha in all the subjects by 6 and less than the sum of marks scored by Sheetal in all the subjects by 2.
3. The sum of the marks scored by the five students in English was equal to the sum of the marks scored by the five students in Statistics.
4. The sum of marks scored by all the students in Economics was lower than that in any other subject.

Time taken by you: 0 secs

Avg Time taken by all students: 62 secs

Your Attempt: Skipped

% Students got it correct: 49 %

Refer to the data below and answer the questions that follow.

A company is in the process of selecting a transport agency for the movement of goods. The supply chain department is analyzing agencies on the basis of rates, credit, service and time.

Agencies offering competitive time are not offering any competitive credit.

Number of agencies, which are competitive in rates: 55

Number of agencies, which are competitive in service: 38

Number of agencies, which are competitive in rates and time: 30

Number of agencies, which are competitive in service and time: 15

Number of agencies, which are competitive in rates and service: 20

Number of agencies, which are competitive in rates, service and time: 5

Number of agencies, which are competitive in credit: 22

Number of agencies, which are competitive in credit and service: 5

Number of agencies, which are competitive in credit and rates: 5

Number of agencies, which are competitive in credit, rates and service: 5

Number of agencies, which are competitive in time: 50

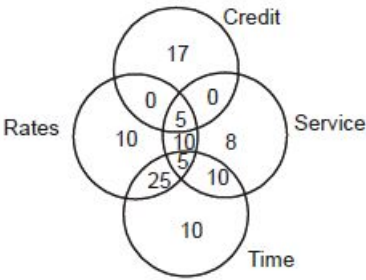
1) At least how many agencies have been analyzed by the company?

- ☐ 123
- ☒ 100
- ☐ 117
- ☐ Cannot be determined

Video Explanation:

Explanation:

The data can be represented as follows:



The number of agencies which are competitive in at least one of the parameters = $17 + 5 + 10 + 10 + 5 + 25 + 10 + 10 + 8 = 100$.
Assuming the number of agencies which are not competitive in any of the given parameters = 0.
We get the least number of agencies analyzed by the company = 100.

Hence, [2].

Correct Answer:

Time taken by you: 316 secs

Avg Time taken by all students: 406 secs

Your Attempt: Correct

% Students got it correct: 67 %

2) What is the difference between the number of agencies offering only two competitive factors and the number of agencies offering more than two competitive factors?

- ☐ 35
- ☐ 45
- ☐ 25
- ☒ 10

Video Explanation:

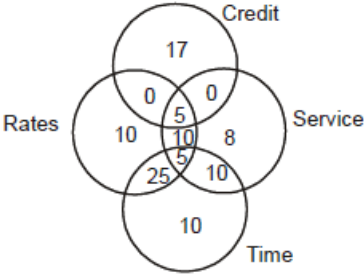
Refer to the data below and answer the questions that follow.

A company is in the process of selecting a transport agency for the movement of goods. The supply chain department is analyzing agencies on the basis of rates, credit, service and time.

Agencies offering competitive time are not offering any competitive credit.

- Number of agencies, which are competitive in rates: 55
- Number of agencies, which are competitive in service: 38
- Number of agencies, which are competitive in rates and time: 30
- Number of agencies, which are competitive in service and time: 15
- Number of agencies, which are competitive in rates and service: 20
- Number of agencies, which are competitive in rates, service and time: 5
- Number of agencies, which are competitive in credit: 22
- Number of agencies, which are competitive in credit and service: 5
- Number of agencies, which are competitive in credit and rates: 5
- Number of agencies, which are competitive in credit, rates and service: 5
- Number of agencies, which are competitive in time: 50

The data can be represented as follows:



Number of agencies offering only two competitive factors = 45
Number of agencies offering more than two competitive factors = 5 + 5 = 10
Thus, difference between them = 45 – 10 = 35
Hence, [1].

Correct Answer:

Time taken by you: 34 secs
Avg Time taken by all students: 79 secs
Your Attempt: Wrong
% Students got it correct: 61 %

3) Find the number of agencies offering only two competitive factors, namely competitive rates and service.

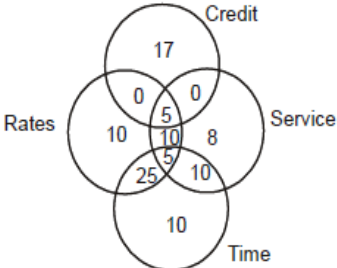
Enter your response (as an integer) using the virtual keyboard in the box provided below.

0

Video Explanation:

Explanation:

The data can be represented as follows:



Number of agencies offering only competitive rates and services = 10.
Therefore, the required answer is 10.

Refer to the data below and answer the questions that follow.

A company is in the process of selecting a transport agency for the movement of goods. The supply chain department is analyzing agencies on the basis of rates, credit, service and time.

Agencies offering competitive time are not offering any competitive credit.

Number of agencies, which are competitive in rates: 55

Number of agencies, which are competitive in service: 38

Number of agencies, which are competitive in rates and time: 30

Number of agencies, which are competitive in service and time: 15

Number of agencies, which are competitive in rates and service: 20

Number of agencies, which are competitive in rates, service and time: 5

Number of agencies, which are competitive in credit: 22

Number of agencies, which are competitive in credit and service: 5

Number of agencies, which are competitive in credit and rates: 5

Number of agencies, which are competitive in credit, rates and service: 5

Number of agencies, which are competitive in time: 50

Time taken by you: 19 secs

Avg Time taken by all students: 27 secs

Your Attempt: Wrong

% Students got it correct: 47 %

4) Find the number of agencies offering at least two competitive factors.

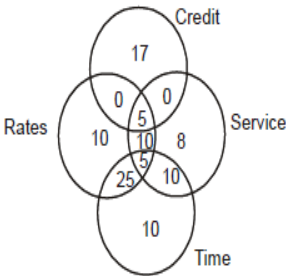
Enter your response (as an integer) using the virtual keyboard in the box provided below.

45

Video Explanation:

Explanation:

The data can be represented as follows:



Number of agencies offering at least two competitive factors = 5 + 10 + 5 + 25 + 10 = 55.

Therefore, the required answer is 55.

Correct Answer:

Time taken by you: 41 secs

Avg Time taken by all students: 18 secs

Your Attempt: Wrong

% Students got it correct: 46 %

Refer to the data below and answer the questions that follow.

A company is in the process of selecting a transport agency for the movement of goods. The supply chain department is analyzing agencies on the basis of rates, credit, service and time.

Agencies offering competitive time are not offering any competitive credit.

Number of agencies, which are competitive in rates: 55

Number of agencies, which are competitive in service: 38

Number of agencies, which are competitive in rates and time: 30

Number of agencies, which are competitive in service and time: 15

Number of agencies, which are competitive in rates and service: 20

Number of agencies, which are competitive in rates, service and time: 5

Number of agencies, which are competitive in credit: 22

Number of agencies, which are competitive in credit and service: 5

Number of agencies, which are competitive in credit and rates: 5

Number of agencies, which are competitive in credit, rates and service: 5

Number of agencies, which are competitive in time: 50

Refer to the data below and answer the questions that follow.

National Institute of Science (NIS) is an institute of education and research in Biology. There are six different departments in the institute – Biology, Microbiology, Zoology, Genetics, Biochemistry and Ecology. Each department has distinct number of subsections. The number of subsections in each department is more than 1 but less than 10. Each department has occupied one floor each in the six storied building from 1st floor to 6th floor.

1. The number of the subsections in the department on the 1st floor is double of the number of subsections in the department on the 6th floor.
2. Exactly two departments have an even number of subsections.
3. The department on the 2nd floor has the minimum number of subsections and this is an even number.
4. Zoology department is on the 5th floor of the NIS building.
5. The department on the 1st floor has more number of subsections than that on the department on the 3rd floor.
6. The number of subsections in the Microbiology department is more than that of the Genetics department, but less than that of the Biochemistry department.
7. The Biology department has the highest number of subsections, but it is not on the 1st floor.

1) Which department has the 2nd highest number of subsections?

- ☐ Genetics
- ☒ Zoology✔
- ☐ Ecology
- ☐ Microbiology

Video Explanation:

Explanation:

By using point 1, 2 and 3, it is clear that only the departments on the 2nd and the 1st floor have an even number of subsections and all the other departments have an odd number of subsections. So the number of subsections in the department on the 1st floor must be 6. Therefore, the number of subsections in the department on the 6th floor must be 3. And the number of subsections in the department on the 2nd floor must be 2. The number of subsections in the other 3 departments must be 5, 7 and 9. Using point 5, the number of subsections in the department on the 3rd floor must be 5. Using point 7, the number of subsections in Biology department must be 9. Since Zoology department is on 5th floor, Biology department must be on 4th floor. Therefore, the number of subsections in Zoology department must be 7. The following table can be made of floor numbers, departments and number of subsections:

Floor no.	Department	Number of Departments
1		6
2		2
3		5
4	Biology	9
5	Zoology	7
6		3

The departments on the remaining floors cannot be determined. The 2nd highest number of subsections is 7 and Zoology department has 7 subsections. Hence, [2].

Correct Answer:

Time taken by you: 237 secs

Avg Time taken by all students: 565 secs

Your Attempt: Correct

% Students got it correct: 92 %

2) Which floor has the Biology department occupied?

- ☐ 1st floor
- ☐ 3rd floor
- ☒ 4th floor✔
- ☐ Either 3rd or 4th floor

Refer to the data below and answer the questions that follow.

National Institute of Science (NIS) is an institute of education and research in Biology. There are six different departments in the institute – Biology, Microbiology, Zoology, Genetics, Biochemistry and Ecology. Each department has distinct number of subsections. The number of subsections in each department is more than 1 but less than 10. Each department has occupied one floor each in the six storied building from 1st floor to 6th floor.

1. The number of the subsections in the department on the 1st floor is double of the number of subsections in the department on the 6th floor.
2. Exactly two departments have an even number of subsections.
3. The department on the 2nd floor has the minimum number of subsections and this is an even number.
4. Zoology department is on the 5th floor of the NIS building.
5. The department on the 1st floor has more number of subsections than that on the department on the 3rd floor.
6. The number of subsections in the Microbiology department is more than that of the Genetics department, but less than that of the Biochemistry department.
7. The Biology department has the highest number of subsections, but it is not on the 1st floor.

Explanation:

By using point 1, 2 and 3, it is clear that only the departments on the 2nd and the 1st floor have an even number of subsections and all the other departments have an odd number of subsections. So the number of subsections in the department on the 1st floor must be 6. Therefore, the number of subsections in the department on the 6th floor must be 3. And the number of subsections in the department on the 2nd floor must be 2. The number of subsections in the other 3 departments must be 5, 7 and 9. Using point 5, the number of subsections in the department on the 3rd floor must be 5. Using point 7, the number of subsections in Biology department must be 9. Since Zoology department is on 5th floor, Biology department must be on 4th floor. Therefore, the number of subsections in Zoology department must be 7.

The following table can be made of floor numbers, departments and number of subsections:

Floor no.	Department	Number of Departments
1		6
2		2
3		5
4	Biology	9
5	Zoology	7
6		3

The departments on the remaining floors cannot be determined. Biology department is on 4th floor. Hence, [3].

Correct Answer:

Time taken by you: 7 secs

Avg Time taken by all students: 83 secs

Your Attempt: Correct

% Students got it correct: 93 %

3) If the Microbiology department has subsections more than at least two other departments, then how many subsections the department of Ecology has?

- ☐ Exactly 2
- ☐ Exactly 5
- ☒ Either 2 or 3
- ☐ Either 3 or 5

Video Explanation:

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1. The number of the subsections in the department on the 1st floor is double of the number of subsections in the department on the 6th floor.
2. Exactly two departments have an even number of subsections.
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By using point 1, 2 and 3, it is clear that only the departments on the 2nd and the 1st floor have an even number of subsections and all the other departments have an odd number of subsections. So the number of subsections in the department on the 1st floor must be 6. Therefore, the number of subsections in the department on the 6th floor must be 3. And the number of subsections in the department on the 2nd floor must be 2. The number of subsections in the other 3 departments must be 5, 7 and 9. Using point 5, the number of subsections in the department on the 3rd floor must be 5. Using point 7, the number of subsections in Biology department must be 9. Since Zoology department is on 5th floor, Biology department must be on 4th floor. Therefore, the number of subsections in Zoology department must be 7.

The following table can be made of floor numbers, departments and number of subsections:

Floor no.	Department	Number of Departments
1		6
2		2
3		5
4	Biology	9
5	Zoology	7
6		3

The departments on the remaining floors cannot be determined. As per the information given in the question and point 6, it can be concluded that Biochemistry department has 6 subsections and Microbiology department has 5 subsections. Therefore, Genetics department and Ecology department has 2 and 3 subsections in any order.
Hence, [3].

Correct Answer:

Time taken by you: 60 secs

Avg Time taken by all students: 72 secs

Your Attempt: Correct

% Students got it correct: 76 %

4) If the Genetics department does not have the least number of subsections among the six departments, then what best can be said about the number of subsections in Biochemistry department?

- ☒ Exactly 6✔
- ☐ At most 7
- ☐ At least 5
- ☐ Exactly 7

Video Explanation:

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3		5
4	Biology	9
5	Zoology	7
6		3

The departments on the remaining floors cannot be determined. If Genetics department does not have the least number of subsections, then using point 6, Genetics department must have 3 subsections, Microbiology department must have 5 subsections and Biochemistry department must have 6 subsections. Hence, [1].

Correct Answer:

Time taken by you: 34 secs

Avg Time taken by all students: 47 secs

Your Attempt: Correct

% Students got it correct: 88 %

Loading...

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

1) For how many matches can the result be uniquely determined?

Enter your response (as an integer) using the virtual keyboard in the box provided below.

6

Video Explanation:

Explanation:

The number of matches won, lost and drawn for Canada, Sweden, USA and India can be classified as follows:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia				8
India	3	2	0	12
Finland				

Now 8 points of Russia can be like, one match won and 4 matches drawn, in this case Russia must have drawn matches against 4 countries but we can see other than Russia, only 3 other countries have drawn their matches. So this case is not possible. Thus, Russia must have won 2 matches and lost 3 matches. Total number of matches = 15. Now if we do the tally of the number of matches won and lost, we see, the number of matches won = 12 and the number of matches lost = 9. Thus, Finland lost 3 matches and drawn two matches. Now the following table can be made:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia	2	3	0	8
India	3	2	0	12
Finland	0	3	2	2

Here we can conclude that the match between Finland and USA and the match between Finland and Canada was a draw match. So Finland lost its matches against Sweden, Russia and India. Also the match between USA and Canada was a draw.

	Canada	Sweden	USA	Russia	India	Finland
Canada	x		D			D
Sweden		x				W
USA	D		x			D
Russia				x		W
India					x	W
Finland	D	L	D	L	L	x

For 6 matches, the results are known.
Therefore, the required answer is 6.

Correct Answer:

Time taken by you: 727 secs

Avg Time taken by all students: 93 secs

Your Attempt: Correct

% Students got it correct: 19 %

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

2) If India lost against Sweden and Russia, then who won the match between Sweden and Canada? —

- ☒ Canada✔
- ☐ Sweden
- ☐ The match was a Draw
- ☐ Cannot be determined

Video Explanation:



Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

The number of matches won, lost and drawn for Canada, Sweden, USA and India can be classified as follows:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia				8
India	3	2	0	12
Finland				

Now 8 points of Russia can be like, one match won and 4 matches drawn, in this case Russia must have drawn matches against 4 countries but we can see other than Russia, only 3 other countries have drawn their matches. So this case is not possible. Thus, Russia must have won 2 matches and lost 3 matches. Total number of matches = 15. Now if we do the tally of the number of matches won and lost, we see, the number of matches won = 12 and the number of matches lost = 9. Thus, Finland lost 3 matches and drawn two matches. Now the following table can be made:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia	2	3	0	8
India	3	2	0	12
Finland	0	3	2	2

Here we can conclude that the match between Finland and USA and the match between Finland and Canada was a draw match. So Finland lost its matches against Sweden, Russia and India. Also the match between USA and Canada was a draw.

	Canada	Sweden	USA	Russia	India	Finland
Canada	x		D			D
Sweden		x				W
USA	D		x			D
Russia				x		W
India					x	W
Finland	D	L	D	L	L	x

If India lost against Sweden and Russia, the table can be made as follows:

	Canada	Sweden	USA	Russia	India	Finland
Canada	x	W	D	W	L	D
Sweden	L	x	L	W	W	W
USA	D	W	x	W	L	D
Russia	L	L	L	x	W	W
India	W	L	W	L	x	W
Finland	D	L	D	L	L	x

If India lost to Sweden and Russia, then Russia lost to Sweden. Thus, Sweden won against India, Russia and Finland. Therefore, Sweden lost to Canada and USA. Hence, [1].

Correct Answer:

▼

Time taken by you: 81 secs

Avg Time taken by all students: 170 secs

Your Attempt: Correct

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

3) If Sweden won against Canada and USA ,then who won the match between Russia and India?

- ☐ Russia
- ☐ India
- ☐ The match was a Draw
- ☒ Cannot be determined ❌

Video Explanation:

▼

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

The number of matches won, lost and drawn for Canada, Sweden, USA and India can be classified as follows:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia				8
India	3	2	0	12
Finland				

Now 8 points of Russia can be like, one match won and 4 matches drawn, in this case Russia must have drawn matches against 4 countries but we can see other than Russia, only 3 other countries have drawn their matches. So this case is not possible. Thus, Russia must have won 2 matches and lost 3 matches. Total number of matches = 15. Now if we do the tally of the number of matches won and lost, we see, the number of matches won = 12 and the number of matches lost = 9. Thus, Finland lost 3 matches and drawn two matches. Now the following table can be made:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia	2	3	0	8
India	3	2	0	12
Finland	0	3	2	2

Here we can conclude that the match between Finland and USA and the match between Finland and Canada was a draw match. So Finland lost its matches against Sweden, Russia and India. Also the match between USA and Canada was a draw.

	Canada	Sweden	USA	Russia	India	Finland
Canada	x		D			D
Sweden		x				W
USA	D		x			D
Russia				x		W
India					x	W
Finland	D	L	D	L	L	x

If Sweden won against Canada and USA, the table can be made as follows:

	Canada	Sweden	USA	Russia	India	Finland
Canada	x	L	D	W	W	D
Sweden	W	x	W	L	L	W
USA	D	L	x	W	W	D
Russia	L	W	L	x	L	W
India	L	W	L	W	x	W
Finland	D	L	D	L	L	x

If Sweden won against Canada and USA, then Canada and USA both won against India and Russia. Now India definitely won against Russia and Sweden to have the total points 12. Hence, [2].

Correct Answer:



Time taken by you: 68 secs

Avg Time taken by all students: 76 secs

Your Attempt: Wrong

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

4) If Russia is the only team that won against USA, then the results of how many matches can be uniquely determined?

Enter your response (as an integer) using the virtual keyboard in the box provided below.

9

Video Explanation:

▼

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

The number of matches won, lost and drawn for Canada, Sweden, USA and India can be classified as follows:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia				8
India	3	2	0	12
Finland				

Now 8 points of Russia can be like, one match won and 4 matches drawn, in this case Russia must have drawn matches against 4 countries but we can see other than Russia, only 3 other countries have drawn their matches. So this case is not possible. Thus, Russia must have won 2 matches and lost 3 matches. Total number of matches = 15. Now if we do the tally of the number of matches won and lost, we see, the number of matches won = 12 and the number of matches lost = 9. Thus, Finland lost 3 matches and drawn two matches. Now the following table can be made:

	Wins	Losses	Draws	
Canada	2	1	2	10
Sweden	3	2	0	12
USA	2	1	2	10
Russia	2	3	0	8
India	3	2	0	12
Finland	0	3	2	2

Here we can conclude that the match between Finland and USA and the match between Finland and Canada was a draw match. So Finland lost its matches against Sweden, Russia and India. Also the match between USA and Canada was a draw.

	Canada	Sweden	USA	Russia	India	Finland
Canada	x		D			D
Sweden		x				W
USA	D		x			D
Russia				x		W
India					x	W
Finland	D	L	D	L	L	x

If Russia is the only team that won against USA, the table can be made as follows:

	Canada	Sweden	USA	Russia	India	Finland
Canada	x		D	W		D
Sweden		x	L	W		W
USA	D	W	x	L	W	D
Russia	L	L	W	x	L	W
India			L	W	x	W
Finland	D	L	D	L	L	x

Therefore, the required answer is 12.

Correct Answer:

▼

Time taken by you: 71 secs

Avg Time taken by all students: 21 secs

Your Attempt: Wrong

% Students got it correct: 14 %

Refer to the data below and answer the questions that follow.

Six teams Canada, Sweden, USA, Russia, Finland and India participated in an XYZ tournament in which each team played against each other team exactly once. The winning team got 4points while the losing team did not get any points. For a Draw, each team got one point. The total points scored by five teams is given in the below table:

	Total Points
Canada	10
Sweden	12
USA	10
Russia	8
India	12

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Refer to the data below and answer the questions that follow.

A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘NumeK’. He was told that ‘NumeK’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘NumeK’ of Ankit is 1, ‘NumeK’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘NumeK’ of Chandan is 3.) The following conditions were known while solving:

1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
4. For a particular row the sum of the ‘NumeK’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘NumeK’ values of the names of the people sitting adjacent to each other are all prime numbers.
5. The difference between ‘NumeK’ values of Norah and the person sitting opposite to him is 12.

1) What is the minimum difference between the ‘NumeK’ value of _ any two people sitting opposite to each other?

- ☐ 1
- ☐ 2
- ☒ 3
- ☐ 5

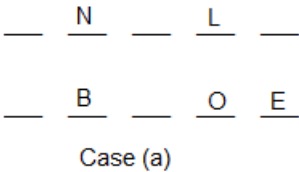
Video Explanation: ▼

Explanation: ▼

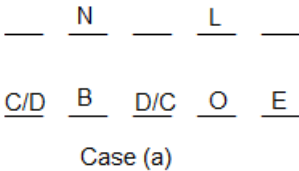
Let us denote each person by the initial letters of their names. Thus, the ‘NumeK’ values i.e. numerical equivalents of all the mentioned people can be written as- A = 1, B = 2, C = 3, D = 4, E = 5, K = 11, L = 12, N = 14, O = 15 and Q = 17. From condition (5) it is clear that the person sitting opposite to N must be B. Using this result obtained along with condition (2) and (3), we get the following 2 cases,



Now, using condition (3), E must be to the right of B but not adjacent to him. ∴ Case (b) can be ruled out. Thus, the only possible case is:



Using condition (4), for a particular row the sum of the numerical equivalents of the names of the people sitting in it is 29. Since we already have, B, O and E (with a total numerical equivalent of 2 + 15 + 5 = 22), the only possible pair of people to obtain a sum of 29 will be C and D.



Again using condition (4), for a particular row, the difference between the numerical equivalents of the names of the people sitting adjacent to each other are all prime numbers. The people that are to be accommodated in the row where N sits are A, K and Q. Since, the difference between the people sitting adjacent to each other in this row must be prime numbers. The possible arrangements are,

Refer to the data below and answer the questions that follow.

A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘NumeK’. He was told that ‘NumeK’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘NumeK’ of Ankit is 1, ‘NumeK’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘NumeK’ of Chandan is 3.) The following conditions were known while solving:

1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
4. For a particular row the sum of the ‘NumeK’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘NumeK’ values of the names of the people sitting adjacent to each other are all prime numbers.
5. The difference between ‘NumeK’ values of Norah and the person sitting opposite to him is 12.

{OR}

C/D	B	D/C	O	E	C/D	B	D/C	O	E
11	14	17	12	1					
K	N	Q	L	A					
D	B	C	O	E					
4	2	3	15	5					

From condition (2), C and Q sit opposite to each other. Thus, the final arrangement will be,

The minimum possible difference is between Larsen and Ozil i.e. 3. Hence, [3].

Correct Answer:

Time taken by you: 320 secs

Avg Time taken by all students: 628 secs

Your Attempt: Correct

% Students got it correct: 79 %

2) How many people sit between Ankit and Qasim?

- ☒

1
- ☐

2
- ☐

3
- ☐

They sit in opposite rows.

Video Explanation:

Refer to the data below and answer the questions that follow.

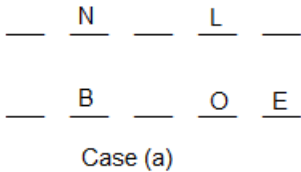
A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘NumeK’. He was told that ‘NumeK’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘NumeK’ of Ankit is 1, ‘NumeK’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘NumeK’ of Chandan is 3.) The following conditions were known while solving:

- 1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
- 2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
- 3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
- 4. For a particular row the sum of the ‘NumeK’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘NumeK’ values of the names of the people sitting adjacent to each other are all prime numbers.
- 5. The difference between ‘NumeK’ values of Norah and the person sitting opposite to him is 12.

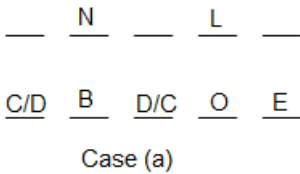
Let us denote each person by the initial letters of their names. Thus, the ‘NumeK’ values i.e. numerical equivalents of all the mentioned people can be written as- A = 1, B = 2, C = 3, D = 4, E = 5, K = 11, L = 12, N = 14, O = 15 and Q = 17. From condition (5) it is clear that the person sitting opposite to N must be B. Using this result obtained along with condition (2) and (3), we get the following 2 cases,



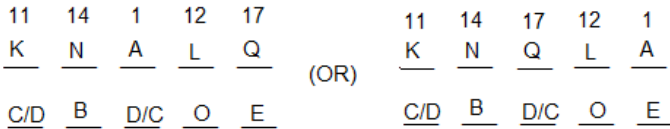
Now, using condition (3), E must be to the right of B but not adjacent to him. ∴ Case (b) can be ruled out. Thus, the only possible case is:



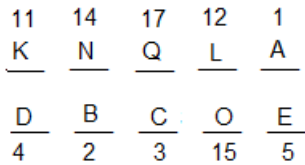
Using condition (4), for a particular row the sum of the numerical equivalents of the names of the people sitting in it is 29. Since we already have, B, O and E (with a total numerical equivalent of 2 + 15 + 5 = 22), the only possible pair of people to obtain a sum of 29 will be C and D.



Again using condition (4), for a particular row, the difference between the numerical equivalents of the names of the people sitting adjacent to each other are all prime numbers. The people that are to be accommodated in the row where N sits are A, K and Q. Since, the difference between the people sitting adjacent to each other in this row must be prime numbers. The possible arrangements are,



From condition (2), C and Q sit opposite to each other. Thus, the final arrangement will be,



Only Larsen sits between Ankit and Qasim. Hence, [1].

Correct Answer:



Time taken by you: 8 secs

Avg Time taken by all students: 77 secs

% Students got it correct: **79 %**

Refer to the data below and answer the questions that follow.

A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘Numek’. He was told that ‘Numek’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘Numek’ of Ankit is 1, ‘Numek’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘Numek’ of Chandan is 3.) The following conditions were known while solving:

1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
4. For a particular row the sum of the ‘Numek’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘Numek’ values of the names of the people sitting adjacent to each other are all prime numbers.
5. The difference between ‘Numek’ values of Norah and the person sitting opposite to him is 12.

3) Who amongst the following sits between two people having prime ‘Numek’ values? —

- ☐ Brijesh
- ☐ Larsen
- ☐ Qasim
- ☒ Norah ✓

Video Explanation: ▼

Refer to the data below and answer the questions that follow.

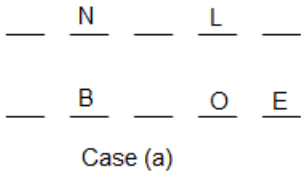
A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘NumeK’. He was told that ‘NumeK’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘NumeK’ of Ankit is 1, ‘NumeK’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘NumeK’ of Chandan is 3.) The following conditions were known while solving:

- 1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
- 2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
- 3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
- 4. For a particular row the sum of the ‘NumeK’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘NumeK’ values of the names of the people sitting adjacent to each other are all prime numbers.
- 5. The difference between ‘NumeK’ values of Norah and the person sitting opposite to him is 12.

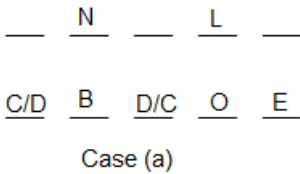
Let us denote each person by the initial letters of their names. Thus, the ‘NumeK’ values i.e. numerical equivalents of all the mentioned people can be written as- A = 1, B = 2, C = 3, D = 4, E = 5, K = 11, L = 12, N = 14, O = 15 and Q = 17. From condition (5) it is clear that the person sitting opposite to N must be B. Using this result obtained along with condition (2) and (3), we get the following 2 cases,



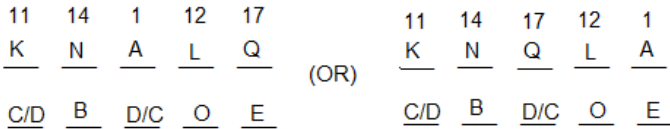
Now, using condition (3), E must be to the right of B but not adjacent to him. ∴ Case (b) can be ruled out. Thus, the only possible case is:



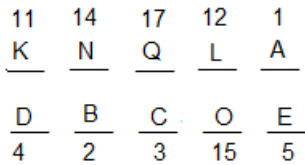
Using condition (4), for a particular row the sum of the numerical equivalents of the names of the people sitting in it is 29. Since we already have, B, O and E (with a total numerical equivalent of 2 + 15 + 5 = 22), the only possible pair of people to obtain a sum of 29 will be C and D.



Again using condition (4), for a particular row, the difference between the numerical equivalents of the names of the people sitting adjacent to each other are all prime numbers. The people that are to be accommodated in the row where N sits are A, K and Q. Since, the difference between the people sitting adjacent to each other in this row must be prime numbers. The possible arrangements are,



From condition (2), C and Q sit opposite to each other. Thus, the final arrangement will be,



% Students got it correct: **75 %**

Refer to the data below and answer the questions that follow.

A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘Numek’. He was told that ‘Numek’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘Numek’ of Ankit is 1, ‘Numek’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘Numek’ of Chandan is 3.) The following conditions were known while solving:

1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
4. For a particular row the sum of the ‘Numek’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘Numek’ values of the names of the people sitting adjacent to each other are all prime numbers.
5. The difference between ‘Numek’ values of Norah and the person sitting opposite to him is 12.

4) Which of the following is correct?

- ☐ Brijesh faces the person to the immediate right of Larsen.
- ☐ Qasim sits 4 places to the right of Ankit.
- ☒ Larsen faces the person to the immediate right of Chandan. ✓
- ☐ Dhiru faces the neighbour of Qasim.

Video Explanation:

Refer to the data below and answer the questions that follow.

A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘NumeK’. He was told that ‘NumeK’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘NumeK’ of Ankit is 1, ‘NumeK’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘NumeK’ of Chandan is 3.) The following conditions were known while solving:

1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
4. For a particular row the sum of the ‘NumeK’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘NumeK’ values of the names of the people sitting adjacent to each other are all prime numbers.
5. The difference between ‘NumeK’ values of Norah and the person sitting opposite to him is 12.

Let us denote each person by the initial letters of their names. Thus, the ‘NumeK’ values i.e. numerical equivalents of all the mentioned people can be written as- A= 1, B = 2, C = 3, D = 4, E = 5, K = 11, L = 12, N = 14, O = 15 and Q = 17. From condition (5) it is clear that the person sitting opposite to N must be B. Using this result obtained along with condition (2) and (3), we get the following 2 cases,

—	<u>N</u>	—	<u>L</u>	—	—	<u>L</u>	—	<u>N</u>	—
—	<u>B</u>	—	<u>O</u>	—	—	<u>O</u>	—	<u>B</u>	—
Case (a)					Case (b)				

Now, using condition (3), E must be to the right of B but not adjacent to him. ∴ Case (b) can be ruled out. Thus, the only possible case is:

—	<u>N</u>	—	<u>L</u>	—	—
—	<u>B</u>	—	<u>O</u>	<u>E</u>	—
Case (a)					

Using condition (4), for a particular row the sum of the numerical equivalents of the names of the people sitting in it is 29. Since we already have, B, O and E (with a total numerical equivalent of 2 + 15 + 5 = 22), the only possible pair of people to obtain a sum of 29 will be C and D.

—	<u>N</u>	—	<u>L</u>	—	—
<u>C/D</u>	<u>B</u>	<u>D/C</u>	<u>O</u>	<u>E</u>	—
Case (a)					

Again using condition (4), for a particular row, the difference between the numerical equivalents of the names of the people sitting adjacent to each other are all prime numbers. The people that are to be accommodated in the row where N sits are A, K and Q. Since, the difference between the people sitting adjacent to each other in this row must be prime numbers. The possible arrangements are,

11	14	1	12	17	11	14	17	12	1
<u>K</u>	<u>N</u>	<u>A</u>	<u>L</u>	<u>Q</u>	<u>K</u>	<u>N</u>	<u>Q</u>	<u>L</u>	<u>A</u>
(OR)					<u>C/D</u>	<u>B</u>	<u>D/C</u>	<u>O</u>	<u>E</u>

From condition (2), C and Q sit opposite to each other. Thus, the final arrangement will be,

11	14	17	12	1
<u>K</u>	<u>N</u>	<u>Q</u>	<u>L</u>	<u>A</u>
<u>D</u>	<u>B</u>	<u>C</u>	<u>O</u>	<u>E</u>
4	2	3	15	5

Only option [3] is true. Hence, [3].

Correct Answer:

Time taken by you: 23 secs

Avg Time taken by all students: 51 secs

Your Attempt: Correct

Refer to the data below and answer the questions that follow.

A puzzle enthusiast was given a puzzle involving a seating arrangement of ten friends Ankit, Brijesh, Chandan, Dhiru, Eftikaar, Kalim, Larsen, Norah, Ozil and Qasim who are made to sit in two parallel rows having five seats in each row. It was known that the people in opposite rows face each other. However, he found that the puzzle was not an ordinary puzzle as it involved a term ‘NumeK’. He was told that ‘NumeK’ of a name denotes the position of the first letter of the name in the English alphabet (i.e., ‘NumeK’ of Ankit is 1, ‘NumeK’ of Brijesh is 2 etc. because A, B are 1st and 2nd letters of the English alphabet. Similarly, ‘NumeK’ of Chandan is 3.) The following conditions were known while solving:

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1. Brijesh and Larsen sit in opposite rows and the number of people to the right of Brijesh, who does not sit at any extreme position, is same as the number of people to the right of Larsen.
2. Chandan sits opposite Qasim and Ozil sits opposite Larsen.
3. Eftikaar and Brijesh sit in the same row. Although Eftikaar sits to the right of Brijesh, he does not sit adjacent to him.
4. For a particular row the sum of the ‘NumeK’ values of the names of the people sitting in it is 29. While for the other row the difference between the ‘NumeK’ values of the names of the people sitting adjacent to each other are all prime numbers.
5. The difference between ‘NumeK’ values of Norah and the person sitting opposite to him is 12.

Refer to the data below and answer the questions that follow.

Meenal plans to visit ‘Fun World’ theme park. The park has nine different entertainment zones and each zone has a definite time and duration to visit. Meenal gets the timings of each entertainment zone from its website, which is as follows:

Entertainment Zone	Duration	Show Times
Alibaba Chalis Chor	60 minutes	10:00 AM and 3:00 PM
Mr. India	60 minutes	11:30 AM and 12:30 PM
Seven Wonders of the World	30 minutes	11:00 AM and 12:00 noon
I Love My India	60 minutes	11:00 AM and 12:00 noon
Chacha Choudhary & Saabu	60 minutes	10:30 AM, 1:00 PM and 3:00 PM
Crocodile World	30 minutes	12:00 noon and 2:30 PM
Snow Park	60 minutes	4:30 PM and 5:30 PM
Dino Land	30 minutes	4:00 PM and 5:00 PM
Fun Carnival	60 minutes	4:00 PM and 5:00 PM

Meenal prepared her schedule of visiting all the entertainment zones subject to the following conditions:

1] Meenal plans to have lunch between 1:30 PM and 2:30 PM, as a result of which, she cannot visit any entertainment zone during that time.

2] The time taken to move from one entertainment zone to other is negligible.

1) Which is the 3rd entertainment zone does Meenal plan to visit?

- ☐ Mr. India
- ☒ Seven Wonders of the World✔
- ☐ I love my India
- ☐ Cannot be determined

Video Explanation:

Explanation:

The first zone Meenal can enter is ‘Alibaba Chalis Chor’ at 10:00 AM. After that, at 11:00 AM, Meenal has 2 options to visit: ‘Seven Wonders of the World’ & ‘I Love My India’.

Case 1: She plans to visit ‘Seven Wonders of the World’, she will be free at 11:30 AM. Then at 11:30 AM, she visits ‘Mr. India’, she will be free at 12:30 PM. No entertainment zone can be visited at 12:30 PM. So, she will not select his option.

Case 2: She plans to visit ‘I Love My India’. She will be free at 12 noon. Then at 12 noon, she again has two options to select: ‘Crocodile World’ & ‘Seven Wonders of the World’.

If she visits ‘Crocodile World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. No entertainment zone other than ‘Crocodile World’ can be visited at 2:30 PM. So, she will not select this option also.

If she visits ‘Seven Wonders of the World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. ‘Crocodile World’ can be visited at 2:30 PM to 3:00 PM. Then ‘Chacha Choudhary & Saabu’ can be visited from 3:00 PM to 4:00 PM. At 4:00 PM, if she visits ‘Dino Land’, she will visit ‘Snow Park’ at 4:30 PM till 5:30 PM and miss the ‘Fun Carnival’ zone.

So, at 4:00 PM, she visits ‘Fun Carnival’ till 5:00 PM followed by ‘Dino Land’ at 5:00 PM and then at 5:30 PM to 6:30 PM, she will be visiting ‘Snow Park’.

Thus, we have

Timings	Duration	Entertainment Zone
10:00 AM to 11:00 AM	60 minutes	Alibaba Chalis Chor
11:00 AM to 12:00 noon	60 minutes	I Love My India
12:00 noon to 12:30 PM	30 minutes	Seven Wonders of the World
12:30 PM to 1:30 PM	60 minutes	Mr. India
2:30 PM to 3:00 PM	30 minutes	Crocodile World
3:00 PM to 4:00 PM	60 minutes	Chacha Choudhary & Saabu
4:00 PM to 5:00 PM	60 minutes	Fun Carnival
5:00 PM to 5:30 PM	30 minutes	Dino Land
5:30 PM to 6:30 PM	60 minutes	Snow Park

Hence, [2].

Correct Answer:

Time taken by you: 292 secs

Avg Time taken by all students: 467 secs

Your Attempt: Correct

Refer to the data below and answer the questions that follow.

Meenal plans to visit ‘Fun World’ theme park. The park has nine different entertainment zones and each zone has a definite time and duration to visit. Meenal gets the timings of each entertainment zone from its website, which is as follows:

Entertainment Zone	Duration	Show Times
Alibaba Chalis Chor	60 minutes	10:00 AM and 3:00 PM
Mr. India	60 minutes	11:30 AM and 12:30 PM
Seven Wonders of the World	30 minutes	11:00 AM and 12:00 noon
I Love My India	60 minutes	11:00 AM and 12:00 noon
Chacha Choudhary & Saabu	60 minutes	10:30 AM, 1:00 PM and 3:00 PM
Crocodile World	30 minutes	12:00 noon and 2:30 PM
Snow Park	60 minutes	4:30 PM and 5:30 PM
Dino Land	30 minutes	4:00 PM and 5:00 PM
Fun Carnival	60 minutes	4:00 PM and 5:00 PM

Meenal prepared her schedule of visiting all the entertainment zones subject to the following conditions:
1] Meenal plans to have lunch between 1:30 PM and 2:30 PM, as a result of which, she cannot visit any entertainment zone during that time.
2] The time taken to move from one entertainment zone to other is negligible.

2) Which is the 6th entertainment zone does Meenal plan to visit? —

- ☐ Crocodile World
- ☐ Snow Park
- ☒ Chacha Choudhary & Saabu✔
- ☐ Cannot be determined

Video Explanation: ▼

Explanation: ▼

The first zone Meenal can enter is ‘Alibaba Chalis Chor’ at 10:00 AM. After that, at 11:00 AM, Meenal has 2 options to visit: ‘Seven Wonders of the World’ & ‘I Love My India’.
Case 1: She plans to visit ‘Seven Wonders of the World’, she will be free at 11:30 AM. Then at 11:30 AM, she visits ‘Mr. India’, she will be free at 12:30 PM. No entertainment zone can be visited at 12:30 PM. So, she will not select his option.

Case 2: She plans to visit ‘I Love My India’. She will be free at 12 noon. Then at 12 noon, she again has two options to select: ‘Crocodile World’ & ‘Seven Wonders of the World’.
If she visits ‘Crocodile World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. No entertainment zone other than ‘Crocodile World’ can be visited at 2:30 PM. So, she will not select this option also.

If she visits ‘Seven Wonders of the World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. ‘Crocodile World’ can be visited at 2:30 PM to 3:00 PM. Then ‘Chacha Choudhary & Saabu’ can be visited from 3:00 PM to 4:00 PM. At 4:00 PM, if she visits ‘Dino Land’, she will visit ‘Snow Park’ at 4:30 PM till 5:30 PM and miss the ‘Fun Carnival’ zone.
So, at 4:00 PM, she visits ‘Fun Carnival’ till 5:00 PM followed by ‘Dino Land’ at 5:00 PM and then at 5:30 PM to 6:30 PM, she will be visiting ‘Snow Park’.
Thus, we have

Timings	Duration	Entertainment Zone
10:00 AM to 11:00 AM	60 minutes	Alibaba Chalis Chor
11:00 AM to 12:00 noon	60 minutes	I Love My India
12:00 noon to 12:30 PM	30 minutes	Seven Wonders of the World
12:30 PM to 1:30 PM	60 minutes	Mr. India
2:30 PM to 3:00 PM	30 minutes	Crocodile World
3:00 PM to 4:00 PM	60 minutes	Chacha Choudhary & Saabu
4:00 PM to 5:00 PM	60 minutes	Fun Carnival
5:00 PM to 5:30 PM	30 minutes	Dino Land
5:30 PM to 6:30 PM	60 minutes	Snow Park

Hence, [3].

Correct Answer: ▼

Time taken by you: 77 secs

Avg Time taken by all students: 58 secs

Your Attempt: Correct

Refer to the data below and answer the questions that follow.

Meenal plans to visit ‘Fun World’ theme park. The park has nine different entertainment zones and each zone has a definite time and duration to visit. Meenal gets the timings of each entertainment zone from its website, which is as follows:

Entertainment Zone	Duration	Show Times
Alibaba Chalis Chor	60 minutes	10:00 AM and 3:00 PM
Mr. India	60 minutes	11:30 AM and 12:30 PM
Seven Wonders of the World	30 minutes	11:00 AM and 12:00 noon
I Love My India	60 minutes	11:00 AM and 12:00 noon
Chacha Choudhary & Saabu	60 minutes	10:30 AM, 1:00 PM and 3:00 PM
Crocodile World	30 minutes	12:00 noon and 2:30 PM
Snow Park	60 minutes	4:30 PM and 5:30 PM
Dino Land	30 minutes	4:00 PM and 5:00 PM
Fun Carnival	60 minutes	4:00 PM and 5:00 PM

Meenal prepared her schedule of visiting all the entertainment zones subject to the following conditions:
1] Meenal plans to have lunch between 1:30 PM and 2:30 PM, as a result of which, she cannot visit any entertainment zone during that time.
2] The time taken to move from one entertainment zone to other is negligible.

3) The ticket prices of all the 9 zones are in arithmetic progression. Meenal calculates her total expenses on tickets as Rs. 360. What can be the minimum ticket price of a zone? (The prices of all the entertainment zones, when expressed in Rupees are natural numbers).

Enter your response (as an integer) using the virtual keyboard in the box provided below.

4

Video Explanation: ▼

Explanation: ▼

The first zone Meenal can enter is ‘Alibaba Chalis Chor’ at 10:00 AM. After that, at 11:00 AM, Meenal has 2 options to visit: ‘Seven Wonders of the World’ & ‘I Love My India’.
Case 1: She plans to visit ‘Seven Wonders of the World’, she will be free at 11:30 AM. Then at 11:30 AM, she visits ‘Mr. India’, she will be free at 12:30 PM. No entertainment zone can be visited at 12:30 PM. So, she will not select his option.

Case 2: She plans to visit ‘I Love My India’. She will be free at 12 noon. Then at 12 noon, she again has two options to select: ‘Crocodile World’ & ‘Seven Wonders of the World’.
If she visits ‘Crocodile World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. No entertainment zone other than ‘Crocodile World’ can be visited at 2:30 PM. So, she will not select this option also.

If she visits ‘Seven Wonders of the World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. ‘Crocodile World’ can be visited at 2:30 PM to 3:00 PM. Then ‘Chacha Choudhary & Saabu’ can be visited from 3:00 PM to 4:00 PM. At 4:00 PM, if she visits ‘Dino Land’, she will visit ‘Snow Park’ at 4:30 PM till 5:30 PM and miss the ‘Fun Carnival’ zone.
So, at 4:00 PM, she visits ‘Fun Carnival’ till 5:00 PM followed by ‘Dino Land’ at 5:00 PM and then at 5:30 PM to 6:30 PM, she will be visiting ‘Snow Park’.
Thus, we have

Timings	Duration	Entertainment Zone
10:00 AM to 11:00 AM	60 minutes	Alibaba Chalis Chor
11:00 AM to 12:00 noon	60 minutes	I Love My India
12:00 noon to 12:30 PM	30 minutes	Seven Wonders of the World
12:30 PM to 1:30 PM	60 minutes	Mr. India
2:30 PM to 3:00 PM	30 minutes	Crocodile World
3:00 PM to 4:00 PM	60 minutes	Chacha Choudhary & Saabu
4:00 PM to 5:00 PM	60 minutes	Fun Carnival
5:00 PM to 5:30 PM	30 minutes	Dino Land
5:30 PM to 6:30 PM	60 minutes	Snow Park

The sum of all the ticket price is Rs. 360. Thus, the average ticket price is Rs. 40. The maximum difference of this arithmetic progression can be 9, thus the minimum ticket price can be Rs. 4.
Therefore, the required answer is 4.

Correct Answer: ▼

Refer to the data below and answer the questions that follow.

Meenal plans to visit ‘Fun World’ theme park. The park has nine different entertainment zones and each zone has a definite time and duration to visit. Meenal gets the timings of each entertainment zone from its website, which is as follows:

Entertainment Zone	Duration	Show Times
Alibaba Chalis Chor	60 minutes	10:00 AM and 3:00 PM
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Snow Park	60 minutes	4:30 PM and 5:30 PM
Dino Land	30 minutes	4:00 PM and 5:00 PM
Fun Carnival	60 minutes	4:00 PM and 5:00 PM

Meenal prepared her schedule of visiting all the entertainment zones subject to the following conditions:
1] Meenal plans to have lunch between 1:30 PM and 2:30 PM, as a result of which, she cannot visit any entertainment zone during that time.
2] The time taken to move from one entertainment zone to other is negligible.

Avg Time taken by all students: 68 secs

Your Attempt: **Correct**

% Students got it correct: **43 %**

4) How many different schedules can Meenal come up with? —

Enter your response (as an integer) using the virtual keyboard in the box provided below.

Video Explanation: ▼

Explanation: ▼

The first zone Meenal can enter is ‘Alibaba Chalis Chor’ at 10:00 AM. After that, at 11:00 AM, Meenal has 2 options to visit: ‘Seven Wonders of the World’ & ‘I Love My India’.
Case 1: She plans to visit ‘Seven Wonders of the World’, she will be free at 11:30 AM. Then at 11:30 AM, she visits ‘Mr. India’, she will be free at 12:30 PM. No entertainment zone can be visited at 12:30 PM. So, she will not select his option also.

Case 2: She plans to visit ‘I Love My India’. She will be free at 12 noon. Then at 12 noon, she again has two options to select: ‘Crocodile World’ & ‘Seven Wonders of the World’.
If she visits ‘Crocodile World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. No entertainment zone other than ‘Crocodile World’ can be visited at 2:30 PM. So, she will not select this option also.

If she visits ‘Seven Wonders of the World’, she will be free at 12:30 PM. So, she can visit ‘Mr. India’ from 12:30 PM – 1:30 PM and then can have lunch till 2:30 PM. ‘Crocodile World’ can be visited at 2:30 PM to 3:00 PM. Then ‘Chacha Choudhary & Saabu’ can be visited from 3:00 PM to 4:00 PM. At 4:00 PM, if she visits ‘Dino Land’, she will visit ‘Snow Park’ at 4:30 PM till 5:30 PM and miss the ‘Fun Carnival’ zone.
So, at 4:00 PM, she visits ‘Fun Carnival’ till 5:00 PM followed by ‘Dino Land’ at 5:00 PM and then at 5:30 PM to 6:30 PM, she will be visiting ‘Snow Park’.
Thus, we have

Timings	Duration	Entertainment Zone
10:00 AM to 11:00 AM	60 minutes	Alibaba Chalis Chor
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12:30 PM to 1:30 PM	60 minutes	Mr. India
2:30 PM to 3:00 PM	30 minutes	Crocodile World
3:00 PM to 4:00 PM	60 minutes	Chacha Choudhary & Saabu
4:00 PM to 5:00 PM	60 minutes	Fun Carnival
5:00 PM to 5:30 PM	30 minutes	Dino Land
5:30 PM to 6:30 PM	60 minutes	Snow Park

She can have exactly one schedule to follow. Therefore, the required answer is 1.

Correct Answer: ▼

Refer to the data below and answer the questions that follow.

Meenal plans to visit ‘Fun World’ theme park. The park has nine different entertainment zones and each zone has a definite time and duration to visit. Meenal gets the timings of each entertainment zone from its website, which is as follows:

Entertainment Zone	Duration	Show Times
Alibaba Chalis Chor	60 minutes	10:00 AM and 3:00 PM
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Snow Park	60 minutes	4:30 PM and 5:30 PM
Dino Land	30 minutes	4:00 PM and 5:00 PM
Fun Carnival	60 minutes	4:00 PM and 5:00 PM

Meenal prepared her schedule of visiting all the entertainment zones subject to the following conditions:

- 1] Meenal plans to have lunch between 1:30 PM and 2:30 PM, as a result of which, she cannot visit any entertainment zone during that time.
- 2] The time taken to move from one entertainment zone to other is negligible.

Avg Time taken by all students: 46 secs

Your Attempt: Skipped

% Students got it correct: 58 %

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