

## Mock CAT – 16 2018

Scorecard (procreview.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

Accuracy (AccSelectGraph.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

Qs Analysis (QsAnalysis.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

Video Attempt (VideoAnalysis.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

Solutions (Solution.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

Bookmarks (Bookmarks.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

Toppers (Toppers.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 08:19:12 UTC 2019&qsetId=V2Q0lbv3QNg=&qsetName=Mock CAT – 16 2018)

VARC

LRDI

QA

## Sec 1

**Directions for questions (1 to 6):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

One day not long ago, Augie, a 4-year-old Gopnik grandchild, heard his grandfather wistfully say, “I wish I could be a kid again.” After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was ingenious: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.

No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children’s creativity seems to outstrip that of even the most imaginative adults.

How does the ability to come up with unusual ideas change as we grow older? Does it begin to flag in adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments, which we relate in a newspaper in the Proceedings of the National Academy of Sciences.

We began with a group of participants of various ages: 4- and 5-year-old pre-schoolers; 6- to 11-year-olds; 12- to 14-year-old teenagers; and adults. We presented them with a scenario involving a physical machine that lit up when you put some combinations of blocks on it, but not others. Either of two hypotheses could explain how the machine worked. It could work in a usual and obvious way: some individual blocks would make it light up, and the other blocks were irrelevant. Or it could work in a more unusual way: it would take a combination of different blocks to make the machine light up.

We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: we told a story about Sally, who approached a skateboard, and Josie, who avoided a scooter. How come? The usual explanation was that something about Sally's and Josie's individual traits made them act as they did – maybe Sally was braver than Josie. A more unusual, though equally valid, explanation was that something about the situation was important – maybe the skateboard was safer than the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally's traits – they gave the obvious explanation.

Then we added a twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. Would the participants go with the obvious explanation, or try something new?

When it came to explaining the physical machine, the pattern was straightforward. The pre-schoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the teenagers and the adults were the most likely to stick with the obvious explanation even when it didn't fit the data.

But there was a different pattern when it came to the social problems. Once again the pre-schoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the teenagers were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults. Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That's mostly an advantage, of course. But it also may lead us to ignore evidence that contradicts what we already think. We become too set in our ways to change.

When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration – trying something new – may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both pre-schoolers and teenagers have been known to do.

---

Q.1

The primary purpose of the passage is to:

- 
- 1 ☐ showcase the pros and cons of making decisions based on imagination.
- 
- 2 ☐ showcase the usefulness of unusual decisions.
-

3 ☐ showcase how growing up affects our imagination.

4 ☐ showcase the power of infants over adults.



**Solution:**

**Correct Answer : 3**

**Your Answer : 3**

**Genre: Psychology / Education**

**Word Count# 666**

**Refer to- "No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children's creativity seems to outstrip that of even the most imaginative adults." The entire passage revolves around this particular sentence. The given passage justifies this particular point. So, option 3 is the only relevant option.**

**Option 1 – It's too generic. It talks about imagination and decision making in a generic sense.**

**Option 2 – 'Unusual decisions' is an alien concept in terms of the focus of the author.**

**Option 4 – This is a vague option. The definition of 'what kind of power' is not mentioned. Secondly, infant is not the same as children.**

FeedBack

**Bookmark**

**Answer key/Solution**

**Directions for questions (1 to 6): The passage below is accompanied by a set of six questions. Choose the best answer to each question.**

**One day not long ago, Augie, a 4-year-old Gopnik grandchild, heard his grandfather wistfully say, "I wish I could be a kid again." After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was ingenious: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.**

**No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children's creativity seems to outstrip that of even the most imaginative adults.**

**How does the ability to come up with unusual ideas change as we grow older? Does it begin to flag in adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments, which we relate in a newspaper in the Proceedings of the National Academy of Sciences.**

**We began with a group of participants of various ages: 4- and 5-year-old pre-schoolers; 6- to 11-year-olds; 12- to 14-year-old teenagers; and adults. We presented them with a scenario involving a physical machine that lit up when you put some combinations of blocks on it, but not others. Either of two hypotheses could explain how the machine worked. It could work in a usual and obvious way: some individual blocks would make it light up, and the other blocks were irrelevant. Or it could work in a more unusual way: it would take a combination of different blocks to make the machine light up.**

**We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: we told a story about Sally, who approached a skateboard, and Josie, who avoided a scooter. How come? The usual explanation was that something about Sally's and Josie's individual traits made them act as they did – maybe Sally was braver than Josie. A more unusual, though equally valid, explanation was that something about the situation was important – maybe the skateboard was safer than**

the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally's traits — they gave the obvious explanation.

Then we added a twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. Would the participants go with the obvious explanation, or try something new?

When it came to explaining the physical machine, the pattern was straightforward. The pre-schoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the teenagers and the adults were the most likely to stick with the obvious explanation even when it didn't fit the data.

But there was a different pattern when it came to the social problems. Once again the pre-schoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the teenagers were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults. Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That's mostly an advantage, of course. But it also may lead us to ignore evidence that contradicts what we already think. We become too set in our ways to change.

When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration — trying something new — may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both pre-schoolers and teenagers have been known to do.

---

Q.2

Why do adults always go for the obvious solution to a particular problem?

---

1 ☐ Because they become set in their way of thinking.

---

2 ☐ Because they believe in the stereotypes.

---

3 ☐ Because they have forgotten to think beyond what they know.

---

4 ☐ Because they know more.



Solution:

Correct Answer : 1

Your Answer : 1

Genre: Psychology / Education

Word Count# 666

It's a very easy question.

Refer to the last paragraph. Pay attention to the line - "When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far." We try to quickly find a pretty good solution that is close to the solutions we already have." Hence 1 is the correct answer.

Option 2 – The idea of stereotypes is a distorted one. It's not the same as 'knowledge we have acquired so far'.

Option 3 – This is the trap option. It may look close but the paragraph doesn't state that the adults have forgotten to think beyond their known sphere. The author says that they don't want to – voluntarily. Hence, it is an incorrect answer.

Option 4 – This is clearly wrong. It is vague and irrelevant.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

Directions for questions (1 to 6): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

One day not long ago, Augie, a 4-year-old Gopnik grandchild, heard his grandfather wistfully say, "I wish I could be a kid again." After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was ingenious: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.

No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children's creativity seems to outstrip that of even the most imaginative adults.

How does the ability to come up with unusual ideas change as we grow older? Does it begin to flag in adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments, which we relate in a newspaper in the Proceedings of the National Academy of Sciences.

We began with a group of participants of various ages: 4- and 5-year-old pre-schoolers; 6- to 11-year-olds; 12- to 14-year-old teenagers; and adults. We presented them with a scenario involving a physical machine that lit up when you put some combinations of blocks on it, but not others. Either of two hypotheses could explain how the machine worked. It could work in a usual and obvious way: some individual blocks would make it light up, and the other blocks were irrelevant. Or it could work in a more unusual way: it would take a combination of different blocks to make the machine light up.

We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: we told a story about Sally, who approached a skateboard, and Josie, who avoided a scooter. How come? The usual explanation was that something about Sally's and Josie's individual traits made them act as they did – maybe Sally was braver than Josie. A more unusual, though equally valid, explanation was that something about the situation was important – maybe the skateboard was safer than the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally's traits – they gave the obvious explanation.

Then we added a twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. Would the participants go with the obvious explanation, or try something new?

When it came to explaining the physical machine, the pattern was straightforward. The pre-schoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the teenagers and the adults were the most likely to stick with the obvious explanation even when it didn't fit the data.

But there was a different pattern when it came to the social problems. Once again the pre-schoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the teenagers were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults. Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That's mostly an advantage, of course. But it also may lead us to ignore evidence that contradicts what we already think. We become too set in our ways to change.

When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration — trying something new — may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both pre-schoolers and teenagers have been known to do.

---

Q.3

From the given passage, it can be inferred that:

- 
- 1 ☐ crazy possibilities never lead to noble outcomes.
- 
- 2 ☐ an adult's thought process is based primarily on experiences that one has gathered through different imaginations.
- 
- 3 ☐ adults often restrict themselves from trying something innovative.
- 
- 4 ☐ innovation is restricted only to infants.
- 



**Solution:**

**Correct Answer : 3**

**Your Answer : 3**

**Genre: Psychology / Education**

**Word Count# 666**

 **Bookmark**

 **Answer key/Solution**

Refer to the last paragraph. "When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration — trying something new — may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge." This makes option 3, the correct choice.

Option 1 – Too extreme. 'Crazy possibilities' is a vague and irrelevant concept.

Option 2 – It's actually wrong. The author states that adults learn from experience, and not from 'different imaginations'. This is actually the primary issue the author raises about adults with respect to the idea of creativity.

Option 4 – This is illogical and incorrect.

FeedBack

**Directions for questions (1 to 6):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

One day not long ago, Augie, a 4-year-old Gopnik grandchild, heard his grandfather wistfully say, "I wish I could be a kid again." After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was ingenious: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.

No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children's creativity seems to outstrip that of even the most imaginative adults.

How does the ability to come up with unusual ideas change as we grow older? Does it begin to flag in adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments, which we relate in a newspaper in the Proceedings of the National Academy of Sciences.

We began with a group of participants of various ages: 4- and 5-year-old pre-schoolers; 6- to 11-year-olds; 12- to 14-year-old teenagers; and adults. We presented them with a scenario involving a physical machine that lit up when you put some combinations of blocks on it, but not others. Either of two hypotheses could explain how the machine worked. It could work in a usual and obvious way: some individual blocks would make it light up, and the other blocks were irrelevant. Or it could work in a more unusual way: it would take a combination of different blocks to make the machine light up.

We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: we told a story about Sally, who approached a skateboard, and Josie, who avoided a scooter. How come? The usual explanation was that something about Sally's and Josie's individual traits made them act as they did — maybe Sally was braver than Josie. A more unusual, though equally valid, explanation was that something about the situation was important — maybe the skateboard was safer than the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally's traits — they gave the obvious explanation.

Then we added a twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. Would the participants go with the obvious explanation, or try something new?

When it came to explaining the physical machine, the pattern was straightforward. The pre-schoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the teenagers and the adults were the most likely to stick with the obvious explanation even when it didn't fit the data.

But there was a different pattern when it came to the social problems. Once again the pre-schoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the teenagers were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults. Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That's mostly an advantage, of course. But it also may lead us to ignore evidence that contradicts what we already think. We become too set in our ways to change.

When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration – trying something new – may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both pre-schoolers and teenagers have been known to do.

Q.4

All of the following are untrue except:

- 1 ☐ in the social experiment which is mentioned in the passage, adults scored less than the teenagers.
- 2 ☐ the imaginative power of teenagers is lower than the pre-school goers.
- 3 ☐ pre-school goers' imaginative strength can overpower even the most imaginative adult.
- 4 ☐ for adults, problem solving with creativity may appear tedious.



**Solution:**

**Correct Answer : 4**

**Your Answer : 4**

**Genre: Psychology / Education**

**Word Count# 666**

Refer to the last line of the given passage-“. But it may also mean that we waste time considering crazy possibilities that will never work something both pre-schoolers and teenagers have been known to do.” All the other options state incorrect facts. Hence 4 is the correct answer.

Option 1 – No data has been given with respect to ‘adults scoring less’.

Option 2 – No comparison has been made between ‘teenagers’ and ‘pre-school graders’.

Option 3 – This option surely looks correct because of ‘can’. However, the passage doesn't give any data about ‘overpowering’. Hence, it is actually quite irrelevant.

 **Bookmark**

 **Answer key/Solution**

FeedBack



---

**Directions for questions (1 to 6):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

One day not long ago, Augie, a 4-year-old Gopnik grandchild, heard his grandfather wistfully say, “I wish I could be a kid again.” After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was ingenious: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.

No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children’s creativity seems to outstrip that of even the most imaginative adults.

How does the ability to come up with unusual ideas change as we grow older? Does it begin to flag in adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments, which we relate in a newspaper in the Proceedings of the National Academy of Sciences.

We began with a group of participants of various ages: 4- and 5-year-old pre-schoolers; 6- to 11-year-olds; 12- to 14-year-old teenagers; and adults. We presented them with a scenario involving a physical machine that lit up when you put some combinations of blocks on it, but not others. Either of two hypotheses could explain how the machine worked. It could work in a usual and obvious way: some individual blocks would make it light up, and the other blocks were irrelevant. Or it could work in a more unusual way: it would take a combination of different blocks to make the machine light up.

We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: we told a story about Sally, who approached a skateboard, and Josie, who avoided a scooter. How come? The usual explanation was that something about Sally’s and Josie’s individual traits made them act as they did – maybe Sally was braver than Josie. A more unusual, though equally valid, explanation was that something about the situation was important – maybe the skateboard was safer than the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally’s traits – they gave the obvious explanation.

Then we added a twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. Would the participants go with the obvious explanation, or try something new?

When it came to explaining the physical machine, the pattern was straightforward. The pre-schoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the teenagers and the adults were the most likely to stick with the obvious explanation even when it didn’t fit the data.

But there was a different pattern when it came to the social problems. Once again the pre-schoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the teenagers were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults. Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That’s mostly an advantage, of course. But it also may lead us to ignore evidence that contradicts what we already think. We become too set in our ways to change.

When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration – trying something new – may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both pre-schoolers and teenagers have been known to do.

Q.5

What was the outcome of the experiments conducted by the author and colleagues?

- 1 ☐ Adults fared better than what was expected.
- 2 ☐ People belonging to different age groups portrayed different unusual ideas.
- 3 ☐ Adults and teenagers were losers when compared with the children below 4-6years.
- 4 ☐ The appearance of unusual problem solving methods varied according to one's age.

Solution:

Correct Answer : 4

Genre: Psychology / Education

Word Count# 666

This can be easily answered by following the method of elimination.

Option 1 – This is the exact opposite of the main idea of the passage.

Option 2 – There is no comprehensive data regarding the different age groups. The author simply talks about adults and kids.

Option 3 – This is clearly wrong as the author doesn't focus on any such finding.

Option 4 – This is the main idea of the passage to some extent. Refer to the first two paragraphs. Hence, it is the correct answer.

FeedBack

Bookmark

Answer key/Solution

Directions for questions (1to 6): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

One day not long ago, Augie, a 4-year-old Gopnik grandchild, heard his grandfather wistfully say, "I wish I could be a kid again." After a thoughtful pause, Augie came up with a suggestion: Grandpa should try not eating any vegetables. The logic was ingenious: Eating vegetables turns children into big strong adults, so not eating vegetables should reverse the process.

No grown-up would ever come up with that idea. But anyone with a 4-year-old can tell similar stories. Young children's creativity seems to outstrip that of even the most imaginative adults.

How does the ability to come up with unusual ideas change as we grow older? Does it begin to flag in adolescence? Before then? To investigate these questions, we and our colleagues recently conducted several experiments, which we relate in a newspaper in the Proceedings of the National Academy of Sciences.

We began with a group of participants of various ages: 4- and 5-year-old pre-schoolers; 6- to 11-year-olds; 12- to 14-year-old teenagers; and adults. We presented them with a scenario involving a physical machine that lit up when you put some combinations of blocks on it, but not others. Either of two hypotheses could explain how the machine worked. It could work in a usual and obvious way: some individual blocks would

make it light up, and the other blocks were irrelevant. Or it could work in a more unusual way: it would take a combination of different blocks to make the machine light up.

We presented the participants with another scenario as well, also with two possible explanations. This scenario was social: we told a story about Sally, who approached a skateboard, and Josie, who avoided a scooter. How come? The usual explanation was that something about Sally's and Josie's individual traits made them act as they did — maybe Sally was braver than Josie. A more unusual, though equally valid, explanation was that something about the situation was important — maybe the skateboard was safer than the scooter.

Presented with these two scenarios, most adults did indeed explain the events by talking about a single block, or about Sally's traits — they gave the obvious explanation.

Then we added a twist. Another group of participants saw the same scenarios, but this time they saw an additional set of facts that made the unusual explanation more likely than the more obvious one. Would the participants go with the obvious explanation, or try something new?

When it came to explaining the physical machine, the pattern was straightforward. The pre-schoolers were most likely to come up with the creative, unusual explanation. The school-age children were somewhat less creative. And there was a dramatic drop at adolescence. Both the teenagers and the adults were the most likely to stick with the obvious explanation even when it didn't fit the data.

But there was a different pattern when it came to the social problems. Once again the pre-schoolers were more likely to give the creative explanation than were the 6-year-olds or adults. Now, however, the teenagers were the most creative group of all. They were more likely to choose the unusual explanation than were either the 6-year-olds or the adults. Why does creativity generally tend to decline as we age? One reason may be that as we grow older, we know more. That's mostly an advantage, of course. But it also may lead us to ignore evidence that contradicts what we already think. We become too set in our ways to change.

When we face a new problem, we adults usually exploit the knowledge about the world we have acquired so far. We try to quickly find a pretty good solution that is close to the solutions we already have. On the other hand, exploration — trying something new — may lead us to a more unusual idea, a less obvious solution, a new piece of knowledge. But it may also mean that we waste time considering crazy possibilities that will never work, something both pre-schoolers and teenagers have been known to do.

---

Q.6

The author gives the example of Augie in order to:

- 
- 1 ☐ introduce the concept of creativity.
- 
- 2 ☐ introduce the ability of creative problem solving in children.
- 
- 3 ☐ introduce the concept of lack of creativity in adults.
- 
- 4 ☐ introduce the concept of decrease in problem solving ability as one grows older.
- 

×

**Solution:**

**Correct Answer : 2**

**Your Answer : 3**

**Genre: Psychology / Education**

**Word Count# 666**

**Authors in different passages give examples to prove their main points. In the beginning of a passage, an author typically introduces his/her main idea by citing an example, a study, or an anecdote.**

**Options 1 and 3 – The main idea of the passage is the lack of use of creativity and not creativity in general. So, these two are incorrect.**

**So, the choice is between options 2 and 4.**

**Option 4 – It is the trap option. It's incorrect because the passage doesn't talk about 'decrease in problem solving ability'. It rather discusses how adults don't try to look for creative solutions. It doesn't mean that they don't have the ability.**

**So, option 2 is the clear answer.**

 **Bookmark**

 **Answer key/Solution**

FeedBack

Directions for questions (7 to 12): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

It is the honourable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind. The evidence of this fact is to be sought, not in the writings of Critics, but in those of Poets themselves.

A majority of the poems were written chiefly with a view to ascertain how far the language of conversation in the middle and lower classes of society is adapted to the purposes of poetic pleasure. Readers accustomed to the gaudiness and inane phraseology of many modern writers, if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness: they will look round for poetry, and will be induced to enquire by what species of courtesy these attempts can be permitted to assume that title. It is desirable that such readers, for their own sakes, should not suffer the solitary word Poetry, a word of very disputed meaning, to stand in the way of their gratification; but that, while they are perusing this book, they should ask themselves if it contains a natural delineation of human passions, human characters, and human incidents; and if the answer be favourable to the author's wishes, that they should consent to be pleased in spite of that most dreadful enemy to our pleasures, our own pre-established codes of decision.

Readers of superior judgment may disapprove of the style in which many of these pieces are executed it must be expected that many lines and phrases will not exactly suit their taste. It will perhaps appear to them, that wishing to avoid the prevalent fault of the day, the author has sometimes descended too low, and that many of his expressions are too familiar, and not of sufficient dignity. It is apprehended, that the more conversant the reader is with our elder writers, and with those in modern times who have been the most successful in painting manners and passions, the fewer complaints of this kind will he have to make.

An accurate taste in poetry, and in all the other arts, Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition. This is mentioned not with so ridiculous a purpose as to prevent the most inexperienced reader from judging for himself; but merely to temper the rashness of decision, and to suggest that if poetry be a subject on which much time has not been bestowed, the judgement may be erroneous, and that in many cases it necessarily will be so.

The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends. The Rime of the Ancyent Marinere was professedly written in imitation of the style, as well as of the spirit of the elder poets; but with a few exceptions, the Author believes that the language adopted in it has been equally intelligible for these three last centuries. The lines entitled Expostulation and Reply, and those which follow, arose out of conversation with a friend who was somewhat unreasonably attached to modern books of moral philosophy.

---

Q.7

What can be inferred about the nature of poetry based on the above passage?

- 
- 1 ☐ The acquiring of a sound poetic taste will require time and effort.
- 
- 2 ☐ Poetry is not something that can be understood by all and sundry.
- 
- 3 ☐ Poetry should primarily be written in the language of common men.
-

---

4 ● Poetry should be read by sidelining every preconceived notion.

---

**Solution:**

**Correct Answer : 1**

**Genre: Literature / Poetry / Book Review**

**Word Count# 568**

Options 2 and 4 are nowhere mentioned and indicated. The intention of the author is not to talk about the ability to understand poetry. It is rather about the process of developing a poetic taste.

Option 3 is incorrect. The author mentions that through his poems he wishes to check how far the language of common people is adapted for the purpose of poetic pleasure.

Option 1 can be inferred based on the penultimate paragraph. The author talks about "an accurate taste in poetry", which deals with continuous thought, and then states that he mentioned it in order "to avoid the rashness of decision". This is appropriately conveyed by option 1.

🔖 Bookmark

🔍 Answer key/Solution

FeedBack

Directions for questions (7 to 12): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

It is the honourable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind. The evidence of this fact is to be sought, not in the writings of Critics, but in those of Poets themselves.

A majority of the poems were written chiefly with a view to ascertain how far the language of conversation in the middle and lower classes of society is adapted to the purposes of poetic pleasure. Readers accustomed to the gaudiness and inane phraseology of many modern writers, if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness: they will look round for poetry, and will be induced to enquire by what species of courtesy these attempts can be permitted to assume that title. It is desirable that such readers, for their own sakes, should not suffer the solitary word Poetry, a word of very disputed meaning, to stand in the way of their gratification; but that, while they are perusing this book, they should ask themselves if it contains a natural delineation of human passions, human characters, and human incidents; and if the answer be favourable to the author's wishes, that they should consent to be pleased in spite of that most dreadful enemy to our pleasures, our own pre-established codes of decision.

Readers of superior judgment may disapprove of the style in which many of these pieces are executed it must be expected that many lines and phrases will not exactly suit their taste. It will perhaps appear to them, that wishing to avoid the prevalent fault of the day, the author has sometimes descended too low, and that many of his expressions are too familiar, and not of sufficient dignity. It is apprehended, that the more conversant the reader is with our elder writers, and with those in modern times who have been the most successful in painting manners and passions, the fewer complaints of this kind will he have to make.

An accurate taste in poetry, and in all the other arts, Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition. This is mentioned not with so ridiculous a purpose as to prevent the most inexperienced reader from judging for himself; but merely to temper the rashness of decision, and to suggest that if poetry be a subject on which much time has not been bestowed, the judgement may be erroneous, and that in many cases it necessarily will be so.

The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends. The Rime of the Ancyent Marinere was professedly written in imitation of the style, as well as of the spirit of the elder poets; but with a few exceptions, the Author believes that the language adopted in it has been equally intelligible for these three last centuries. The lines entitled Expostulation and Reply, and those which follow, arose out of conversation with a friend who was somewhat unreasonably attached to modern books of moral philosophy.

Q.8

Based on the passage, what does "an accurate taste in poetry" mean?

- 1 ☐ It refers to a preference that is acquired, and never comes from within.
- 2 ☐ It is one that is attained by continuous thought and interaction.
- 3 ☐ It refers to a taste that can be acquired only by composing a variety of pieces.

---

4 ☐ It is the preference that is possessed by the best models of composition.

---



**Solution:**

**Correct Answer : 2**

**Your Answer : 2**

**Genre: Literature / Poetry / Book Review**

**Word Count# 568**

The passage states- "An accurate taste in poetry... is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition." This makes option 2 correct.

Option 4 is vague.

Option 1 is incorrect as it is nowhere stated if this taste comes from within or not.

Option 3 is beyond the scope of the passage.

 **Bookmark**

 **Answer key/Solution**

FeedBack



Directions for questions (7 to 12): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

It is the honourable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind. The evidence of this fact is to be sought, not in the writings of Critics, but in those of Poets themselves.

A majority of the poems were written chiefly with a view to ascertain how far the language of conversation in the middle and lower classes of society is adapted to the purposes of poetic pleasure. Readers accustomed to the gaudiness and inane phraseology of many modern writers, if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness: they will look round for poetry, and will be induced to enquire by what species of courtesy these attempts can be permitted to assume that title. It is desirable that such readers, for their own sakes, should not suffer the solitary word Poetry, a word of very disputed meaning, to stand in the way of their gratification; but that, while they are perusing this book, they should ask themselves if it contains a natural delineation of human passions, human characters, and human incidents; and if the answer be favourable to the author's wishes, that they should consent to be pleased in spite of that most dreadful enemy to our pleasures, our own pre-established codes of decision.

Readers of superior judgment may disapprove of the style in which many of these pieces are executed it must be expected that many lines and phrases will not exactly suit their taste. It will perhaps appear to them, that wishing to avoid the prevalent fault of the day, the author has sometimes descended too low, and that many of his expressions are too familiar, and not of sufficient dignity. It is apprehended, that the more conversant the reader is with our elder writers, and with those in modern times who have been the most successful in painting manners and passions, the fewer complaints of this kind will he have to make.

An accurate taste in poetry, and in all the other arts, Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition. This is mentioned not with so ridiculous a purpose as to prevent the most inexperienced reader from judging for himself; but merely to temper the rashness of decision, and to suggest that if poetry be a subject on which much time has not been bestowed, the judgement may be erroneous, and that in many cases it necessarily will be so.

The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends. The Rime of the Ancyent Marinere was professedly written in imitation of the style, as well as of the spirit of the elder poets; but with a few exceptions, the Author believes that the language adopted in it has been equally intelligible for these three last centuries. The lines entitled Expostulation and Reply, and those which follow, arose out of conversation with a friend who was somewhat unreasonably attached to modern books of moral philosophy.

---

Q.9

What according to the author would be the reaction of discerning readers towards the poems discussed in the book?

- 
- 1 ☐ They would feel delighted to read the language of the common man.
- 
- 2 ☐ They would feel disgusted at being made to read the language of the middle and the lower classes.
- 
- 3 ☐ They will be indifferent as similar sort of poetry has been taking shape lately.
-

---

4 ☐ They would be surrounded by feelings of unfamiliarity and surprise.

---

**Solution:**

**Correct Answer : 4**

**Genre: Literature / Poetry / Book Review**

**Word Count# 568**

The passage states- "if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness", which makes 4 correct. 'Disgusted' is too strong a term to be used. Other options cannot be concluded based on the information given in the passage.

 **Bookmark**

 **Answer key/Solution**

FeedBack

Directions for questions (7 to 12): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

It is the honourable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind. The evidence of this fact is to be sought, not in the writings of Critics, but in those of Poets themselves.

A majority of the poems were written chiefly with a view to ascertain how far the language of conversation in the middle and lower classes of society is adapted to the purposes of poetic pleasure. Readers accustomed to the gaudiness and inane phraseology of many modern writers, if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness: they will look round for poetry, and will be induced to enquire by what species of courtesy these attempts can be permitted to assume that title. It is desirable that such readers, for their own sakes, should not suffer the solitary word Poetry, a word of very disputed meaning, to stand in the way of their gratification; but that, while they are perusing this book, they should ask themselves if it contains a natural delineation of human passions, human characters, and human incidents; and if the answer be favourable to the author's wishes, that they should consent to be pleased in spite of that most dreadful enemy to our pleasures, our own pre-established codes of decision.

Readers of superior judgment may disapprove of the style in which many of these pieces are executed it must be expected that many lines and phrases will not exactly suit their taste. It will perhaps appear to them, that wishing to avoid the prevalent fault of the day, the author has sometimes descended too low, and that many of his expressions are too familiar, and not of sufficient dignity. It is apprehended, that the more conversant the reader is with our elder writers, and with those in modern times who have been the most successful in painting manners and passions, the fewer complaints of this kind will he have to make.

An accurate taste in poetry, and in all the other arts, Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition. This is mentioned not with so ridiculous a purpose as to prevent the most inexperienced reader from judging for himself; but merely to temper the rashness of decision, and to suggest that if poetry be a subject on which much time has not been bestowed, the judgement may be erroneous, and that in many cases it necessarily will be so.

The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends. The Rime of the Ancyent Marinere was professedly written in imitation of the style, as well as of the spirit of the elder poets; but with a few exceptions, the Author believes that the language adopted in it has been equally intelligible for these three last centuries. The lines entitled Expostulation and Reply, and those which follow, arose out of conversation with a friend who was somewhat unreasonably attached to modern books of moral philosophy.

---

Q.10

According to the passage, what are the sources of poetry?

- 
- 1 ☐ Nature in all its forms
- 
- 2 ☐ Anything that captures the attention of the human mind
- 
- 3 ☐ Imagination, which is a result of one's poetic muse
-

---

4 ☐ The life of the middle and lower classes of people.

---



**Solution:**

**Correct Answer : 2**

**Your Answer : 2**

**Genre: Literature / Poetry / Book Review**

**Word Count# 568**

The passage opens with the fact- "It is the honorable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind." This clearly makes 2 correct. Option 1 and 3 are beyond the scope of the passage. The author mentions that the list of poems that follows was written to check if the language of the middle and lower classes of people could be used for poetic pleasure. Hence, option 4 is a distorted fact, which makes it incorrect.

 **Bookmark**

 **Answer key/Solution**

FeedBack

---

Directions for questions (7 to 12): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

It is the honourable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind. The evidence of this fact is to be sought, not in the writings of Critics, but in those of Poets themselves.

A majority of the poems were written chiefly with a view to ascertain how far the language of conversation in the middle and lower classes of society is adapted to the purposes of poetic pleasure. Readers accustomed to the gaudiness and inane phraseology of many modern writers, if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness: they will look round for poetry, and will be induced to enquire by what species of courtesy these attempts can be permitted to assume that title. It is desirable that such readers, for their own sakes, should not suffer the solitary word Poetry, a word of very disputed meaning, to stand in the way of their gratification; but that, while they are perusing this book, they should ask themselves if it contains a natural delineation of human passions, human characters, and human incidents; and if the answer be favourable to the author's wishes, that they should consent to be pleased in spite of that most dreadful enemy to our pleasures, our own pre-established codes of decision.

Readers of superior judgment may disapprove of the style in which many of these pieces are executed it must be expected that many lines and phrases will not exactly suit their taste. It will perhaps appear to them, that wishing to avoid the prevalent fault of the day, the author has sometimes descended too low, and that many of his expressions are too familiar, and not of sufficient dignity. It is apprehended, that the more conversant the reader is with our elder writers, and with those in modern times who have been the most successful in painting manners and passions, the fewer complaints of this kind will he have to make.

An accurate taste in poetry, and in all the other arts, Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition. This is mentioned not with so ridiculous a purpose as to prevent the most inexperienced reader from judging for himself; but merely to temper the rashness of decision, and to suggest that if poetry be a subject on which much time has not been bestowed, the judgement may be erroneous, and that in many cases it necessarily will be so.

The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends. The Rime of the Ancyent Marinere was professedly written in imitation of the style, as well as of the spirit of the elder poets; but with a few exceptions, the Author believes that the language adopted in it has been equally intelligible for these three last centuries. The lines entitled Expostulation and Reply, and those which follow, arose out of conversation with a friend who was somewhat unreasonably attached to modern books of moral philosophy.

---

Q.11

Why does the author include the last paragraph in the passage?

- 
- 1 ☐ To give an insight into the minds and works of the poet who has clearly taken inspiration from his own life for all the poems
- 
- 2 ☐ To showcase the linguistic aspect of the poems with respect to the poet's beliefs
-

---

3 ☐ To introduce us to some of the poems in the book by giving us autobiographical backgrounds to their settings

---

4 ☐ To discuss the poems in the book as works of imagination and simplicity

---

**Solution:**

**Correct Answer : 2**

**Genre: Literature / Poetry / Book Review**

**Word Count# 568**

**Read the last paragraph clearly. Then follow the method of elimination.**

**Option 1 – “The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends.” So, all the poems are not inspired by the author’s life.**

**Option 2 – The entire paragraph talks about the use of language in the poems. So, it is the right answer.**

**“Author believes that the language adopted in it has been equally intelligible for these three last centuries.”**

**Option 3 – No autobiographical setting has been given in the paragraph. If one writes something from one’s experience, it can’t be called a biographical setting. It will be called a source.**

**Option 4 – Nothing is mentioned regarding ‘work of imagination’ or ‘simplicity’. The author also mentions that some poems are inspired by the author’s own life.**

 **Bookmark**

 **Answer key/Solution**

FeedBack

Directions for questions (7 to 12): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

It is the honourable characteristic of Poetry that its materials are to be found in every subject which can interest the human mind. The evidence of this fact is to be sought, not in the writings of Critics, but in those of Poets themselves.

A majority of the poems were written chiefly with a view to ascertain how far the language of conversation in the middle and lower classes of society is adapted to the purposes of poetic pleasure. Readers accustomed to the gaudiness and inane phraseology of many modern writers, if they persist in reading this book to its conclusion, will perhaps frequently have to struggle with feelings of strangeness and awkwardness: they will look round for poetry, and will be induced to enquire by what species of courtesy these attempts can be permitted to assume that title. It is desirable that such readers, for their own sakes, should not suffer the solitary word Poetry, a word of very disputed meaning, to stand in the way of their gratification; but that, while they are perusing this book, they should ask themselves if it contains a natural delineation of human passions, human characters, and human incidents; and if the answer be favourable to the author's wishes, that they should consent to be pleased in spite of that most dreadful enemy to our pleasures, our own pre-established codes of decision.

Readers of superior judgment may disapprove of the style in which many of these pieces are executed it must be expected that many lines and phrases will not exactly suit their taste. It will perhaps appear to them, that wishing to avoid the prevalent fault of the day, the author has sometimes descended too low, and that many of his expressions are too familiar, and not of sufficient dignity. It is apprehended, that the more conversant the reader is with our elder writers, and with those in modern times who have been the most successful in painting manners and passions, the fewer complaints of this kind will he have to make.

An accurate taste in poetry, and in all the other arts, Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought, and a long continued intercourse with the best models of composition. This is mentioned not with so ridiculous a purpose as to prevent the most inexperienced reader from judging for himself; but merely to temper the rashness of decision, and to suggest that if poetry be a subject on which much time has not been bestowed, the judgement may be erroneous, and that in many cases it necessarily will be so.

The tale of Goody Blake and Harry Gill is founded on a well-authenticated fact which happened in Warwickshire. Of the other poems in the collection, it may be proper to say that they are either absolute inventions of the author, or facts which took place within his personal observation or that of his friends. The Rime of the Ancyent Marinere was professedly written in imitation of the style, as well as of the spirit of the elder poets; but with a few exceptions, the Author believes that the language adopted in it has been equally intelligible for these three last centuries. The lines entitled Expostulation and Reply, and those which follow, arose out of conversation with a friend who was somewhat unreasonably attached to modern books of moral philosophy.

---

Q.12

Which of the following best reflects the author's tone towards the book under discussion?

- 
- 1 ☐ Admiring in a nonchalant manner
- 
- 2 ☐ Informative albeit in a subjective manner
- 
- 3 ☐ Evaluative in a caustic manner
-

**Solution:**

**Correct Answer : 4**

**Genre: Literature / Poetry / Book Review**

**Word Count# 568**

The author doesn't criticise the book. His tone is not negative. Hence, option 1(nonchalant) and option 3 (caustic) are incorrect.

Option 2 – There is no subjectivity involved. The author doesn't give personal opinions. The author (who is William Wordsworth, in case you are wondering – this is an excerpt from his Preface to Lyrical Ballads) is very neutral and also appreciative of the book.

So, option 4 is the correct answer.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions (13 to18):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

As bitter cold continues to grip much of North America and helps spawn the fierce storm along the East Coast, the question arises: What's the influence of climate change?

Some scientists studying the connection between climate change and cold spells, which occur when cold Arctic air dips south, say that they may be related. But the importance of the relationship is not fully clear yet.

The Arctic is not as cold as it used to be – the region is warming faster than any other – and studies suggest that this warming is weakening the jet stream, which ordinarily acts like a giant lasso, corralling cold air around the pole.

"There's a lot of agreement that the Arctic plays a role, it's just not known exactly how much," said Marlene Kretschmer, a researcher at the Potsdam Institute for Climate Impact Research in Germany. "It's a very complex system."

The reason a direct connection between cold weather and global warming is still up for debate, scientists say, is that there are many other factors involved. Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.

"I think everyone would agree that potentially the warming Arctic could have impacts on the lower latitudes," said Rick Thoman, climate services manager with the National Weather Service in Fairbanks, Alaska. "But the exact connection on the climate scale is an area of active research."

Much of the Northern Hemisphere is cold this time of year (it's winter, after all). Cold snaps have occurred throughout history – certainly long before industrialization resulted in large emissions of greenhouse gases. And as with any single weather event, it's difficult to directly attribute the influence of climate change to a particular cold spell.

But scientists have been puzzled by data that at first seems counterintuitive: Despite an undeniable overall year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century.



“We’re trying to understand these dynamic processes that lead to cold winters,” Ms. Kretschmer said.

“The changes in very persistent weak states actually contributed to cold outbreaks in Eurasia,” Ms. Kretschmer said. “The bigger question is how this is related to climate change.” When we have a weak temperature gradient between the Arctic and mid-latitudes, the result is weaker winds.

Ordinarily the jet stream is straight, blowing from west to east. When it becomes weaker, it can become wavy, more like a big snake around the Northern Hemisphere.

The weaker winds are more susceptible to disturbances, such as a zone of high pressure that can force colder air southward. These “blocking” high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.

The current cold snap has been in place for more than a week, and the cold air on Wednesday was moving east and colliding with a mass of warmer air from the Atlantic Ocean. That created a storm known as a “bomb cyclone.”

In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term “explosive” — drop in atmospheric pressure. The air starts to move and, aided by the earth’s rotation, begins to rotate. The swirling air can bring high winds and a lot of precipitation, often in the form of snow.

That could happen this time — depending on the track of the storm, parts of the Northeast were expecting heavy snow. But one impact of the storm is even more clear: After it eventually moves off to the north and west, it should draw even more cold polar air into the eastern half of the United States, continuing the big chill.

---

Q.13

Which of the following is false in the light of the given passage?

- 1 ☐ Bomb cyclones are created through the earth’s rotation.
- 2 ☐ Global warming has affected the Arctic region moderately.
- 3 ☐ North America is experiencing colder winter despite temperatures rising globally.
- 4 ☐ Cold snaps have taken place even before the advent of industry.

---

x

---

**Solution:**

**Correct Answer : 2**

**Your Answer : 1**

**Genre: Environmental Studies**

**Word Count# 618**

 **Bookmark**

 **Answer key/Solution**

In the passage it is stated that, 'The Arctic is not as cold as it used to be – the region is warming faster than any other.'

Option 1 – "In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid – meteorologists often use the term "explosive" – drop in atmospheric pressure. The air starts to move and, aided by the earth's rotation, begins to rotate."

Option 3 – "Despite an undeniable overall year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century."

Option 4 – "Much of the Northern Hemisphere is cold this time of year (it's winter, after all). Cold snaps have occurred throughout history – certainly long before industrialization resulted in large emissions of greenhouse gases."

FeedBack

**Directions for questions (13 to18):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

As bitter cold continues to grip much of North America and helps spawn the fierce storm along the East Coast, the question arises: What's the influence of climate change?

Some scientists studying the connection between climate change and cold spells, which occur when cold Arctic air dips south, say that they may be related. But the importance of the relationship is not fully clear yet.

The Arctic is not as cold as it used to be – the region is warming faster than any other – and studies suggest that this warming is weakening the jet stream, which ordinarily acts like a giant lasso, corralling cold air around the pole.

"There's a lot of agreement that the Arctic plays a role, it's just not known exactly how much," said Marlene Kretschmer, a researcher at the Potsdam Institute for Climate Impact Research in Germany. "It's a very complex system."

The reason a direct connection between cold weather and global warming is still up for debate, scientists say, is that there are many other factors involved. Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.

"I think everyone would agree that potentially the warming Arctic could have impacts on the lower latitudes," said Rick Thoman, climate services manager with the National Weather Service in Fairbanks, Alaska. "But the exact connection on the climate scale is an area of active research."

Much of the Northern Hemisphere is cold this time of year (it's winter, after all). Cold snaps have occurred throughout history – certainly long before industrialization resulted in large emissions of greenhouse gases. And as with any single weather event, it's difficult to directly attribute the influence of climate change to a particular cold spell.

But scientists have been puzzled by data that at first seems counterintuitive: Despite an undeniable overall

year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century.

“We’re trying to understand these dynamic processes that lead to cold winters,” Ms. Kretschmer said.

“The changes in very persistent weak states actually contributed to cold outbreaks in Eurasia,” Ms. Kretschmer said. “The bigger question is how this is related to climate change.” When we have a weak temperature gradient between the Arctic and mid-latitudes, the result is weaker winds.

Ordinarily the jet stream is straight, blowing from west to east. When it becomes weaker, it can become wavy, more like a big snake around the Northern Hemisphere.

The weaker winds are more susceptible to disturbances, such as a zone of high pressure that can force colder air southward. These “blocking” high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.

The current cold snap has been in place for more than a week, and the cold air on Wednesday was moving east and colliding with a mass of warmer air from the Atlantic Ocean. That created a storm known as a “bomb cyclone.”

In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term “explosive” — drop in atmospheric pressure. The air starts to move and, aided by the earth’s rotation, begins to rotate. The swirling air can bring high winds and a lot of precipitation, often in the form of snow.

That could happen this time — depending on the track of the storm, parts of the Northeast were expecting heavy snow. But one impact of the storm is even more clear: After it eventually moves off to the north and west, it should draw even more cold polar air into the eastern half of the United States, continuing the big chill.

---

**Q.14**

Which of the following is a concomitant feature of a bomb cyclone?

- 1 ☐ Temperatures between heavier and lighter air experience massive difference.
- 2 ☐ It cools down heated up areas.
- 3 ☐ It brings about the appearance of a storm like situation.
- 4 ☐ It produces weak wavy winds which result in an overall increase in the cold spells especially as the one felt in the US.

**Solution:**

**Correct Answer : 1**

**Genre: Environmental Studies**

**Word Count# 618**

In the passage it is stated that, ‘In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term “explosive” — drop in atmospheric pressure.’ So, option 1 is the direct answer.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

Directions for questions (13 to 18): The passage below is accompanied by a set of six questions. Choose the best answer to each question.

As bitter cold continues to grip much of North America and helps spawn the fierce storm along the East Coast, the question arises: What's the influence of climate change?

Some scientists studying the connection between climate change and cold spells, which occur when cold Arctic air dips south, say that they may be related. But the importance of the relationship is not fully clear yet.

The Arctic is not as cold as it used to be — the region is warming faster than any other — and studies suggest that this warming is weakening the jet stream, which ordinarily acts like a giant lasso, corralling cold air around the pole.

"There's a lot of agreement that the Arctic plays a role, it's just not known exactly how much," said Marlene Kretschmer, a researcher at the Potsdam Institute for Climate Impact Research in Germany. "It's a very complex system."

The reason a direct connection between cold weather and global warming is still up for debate, scientists say, is that there are many other factors involved. Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.

"I think everyone would agree that potentially the warming Arctic could have impacts on the lower latitudes," said Rick Thoman, climate services manager with the National Weather Service in Fairbanks, Alaska. "But the exact connection on the climate scale is an area of active research."

Much of the Northern Hemisphere is cold this time of year (it's winter, after all). Cold snaps have occurred throughout history — certainly long before industrialization resulted in large emissions of greenhouse gases. And as with any single weather event, it's difficult to directly attribute the influence of climate change to a particular cold spell.

But scientists have been puzzled by data that at first seems counterintuitive: Despite an undeniable overall year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century.

"We're trying to understand these dynamic processes that lead to cold winters," Ms. Kretschmer said.

"The changes in very persistent weak states actually contributed to cold outbreaks in Eurasia," Ms. Kretschmer said. "The bigger question is how this is related to climate change." When we have a weak temperature gradient between the Arctic and mid-latitudes, the result is weaker winds.

Ordinarily the jet stream is straight, blowing from west to east. When it becomes weaker, it can become wavy, more like a big snake around the Northern Hemisphere.

The weaker winds are more susceptible to disturbances, such as a zone of high pressure that can force colder air southward. These "blocking" high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.

The current cold snap has been in place for more than a week, and the cold air on Wednesday was moving east and colliding with a mass of warmer air from the Atlantic Ocean. That created a storm known as a

“bomb cyclone.”

In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term “explosive” — drop in atmospheric pressure. The air starts to move and, aided by the earth’s rotation, begins to rotate. The swirling air can bring high winds and a lot of precipitation, often in the form of snow.

That could happen this time — depending on the track of the storm, parts of the Northeast were expecting heavy snow. But one impact of the storm is even more clear: After it eventually moves off to the north and west, it should draw even more cold polar air into the eastern half of the United States, continuing the big chill.

Q.15

The sharp cold experienced by Europeans and North American is a result of:

- 1 ☐ the East Coast becoming cooler.
- 2 ☐ the Arctic unable to control its temperature.
- 3 ☐ high pressure zones forcing colder winds southwards.
- 4 ☐ cold snaps occurring throughout history.



**Solution:**

**Correct Answer : 3**

**Your Answer : 3**

**Genre: Environmental Studies**

**Word Count# 618**

In the passage it is stated that, ‘a zone of high pressure that can force colder air southward. These “blocking” high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.’ So, option 3 is the direct cause.

Option 1 – It is an effect. It’s not the cause.

Options 2 and 4 – These are out of context options.

FeedBack

**Bookmark**

**Answer key/Solution**

**Directions for questions (13 to18):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

As bitter cold continues to grip much of North America and helps spawn the fierce storm along the East Coast, the question arises: What’s the influence of climate change?

Some scientists studying the connection between climate change and cold spells, which occur when cold Arctic air dips south, say that they may be related. But the importance of the relationship is not fully clear yet.

The Arctic is not as cold as it used to be — the region is warming faster than any other — and studies suggest that this warming is weakening the jet stream, which ordinarily acts like a giant lasso, corralling

cold air around the pole.

“There’s a lot of agreement that the Arctic plays a role, it’s just not known exactly how much,” said Marlene Kretschmer, a researcher at the Potsdam Institute for Climate Impact Research in Germany. “It’s a very complex system.”

The reason a direct connection between cold weather and global warming is still up for debate, scientists say, is that there are many other factors involved. Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.

“I think everyone would agree that potentially the warming Arctic could have impacts on the lower latitudes,” said Rick Thoman, climate services manager with the National Weather Service in Fairbanks, Alaska. “But the exact connection on the climate scale is an area of active research.”

Much of the Northern Hemisphere is cold this time of year (it’s winter, after all). Cold snaps have occurred throughout history — certainly long before industrialization resulted in large emissions of greenhouse gases. And as with any single weather event, it’s difficult to directly attribute the influence of climate change to a particular cold spell.

But scientists have been puzzled by data that at first seems counterintuitive: Despite an undeniable overall year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century.

“We’re trying to understand these dynamic processes that lead to cold winters,” Ms. Kretschmer said.

“The changes in very persistent weak states actually contributed to cold outbreaks in Eurasia,” Ms. Kretschmer said. “The bigger question is how this is related to climate change.” When we have a weak temperature gradient between the Arctic and mid-latitudes, the result is weaker winds.

Ordinarily the jet stream is straight, blowing from west to east. When it becomes weaker, it can become wavy, more like a big snake around the Northern Hemisphere.

The weaker winds are more susceptible to disturbances, such as a zone of high pressure that can force colder air southward. These “blocking” high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.

The current cold snap has been in place for more than a week, and the cold air on Wednesday was moving east and colliding with a mass of warmer air from the Atlantic Ocean. That created a storm known as a “bomb cyclone.”

In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term “explosive” — drop in atmospheric pressure. The air starts to move and, aided by the earth’s rotation, begins to rotate. The swirling air can bring high winds and a lot of precipitation, often in the form of snow.

That could happen this time — depending on the track of the storm, parts of the Northeast were expecting heavy snow. But one impact of the storm is even more clear: After it eventually moves off to the north and west, it should draw even more cold polar air into the eastern half of the United States, continuing the big chill.

---

Q.16

Which of the following may not necessarily affect the jet stream in light of the passage?

---

---

1 ☐ Variability of ocean systems

---

2 ☐ Soil temperature

---

3 ☐ Snow cover

---

4 ☐ Ocean temperatures

---



**Solution:**

**Correct Answer : 2**

**Your Answer : 2**

**Genre: Environmental Studies**

**Word Count# 618**

Refer to the line – “Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.” In the passage it is stated that ‘soil moisture’ may form a connection between cold weather and global warming. It’s not soil temperature.

FeedBack

**Bookmark**

**Answer key/Solution**

---

**Directions for questions (13 to18):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

As bitter cold continues to grip much of North America and helps spawn the fierce storm along the East Coast, the question arises: What’s the influence of climate change?

Some scientists studying the connection between climate change and cold spells, which occur when cold Arctic air dips south, say that they may be related. But the importance of the relationship is not fully clear yet.

The Arctic is not as cold as it used to be – the region is warming faster than any other – and studies suggest that this warming is weakening the jet stream, which ordinarily acts like a giant lasso, corralling cold air around the pole.

“There’s a lot of agreement that the Arctic plays a role, it’s just not known exactly how much,” said Marlene Kretschmer, a researcher at the Potsdam Institute for Climate Impact Research in Germany. “It’s a very complex system.”

The reason a direct connection between cold weather and global warming is still up for debate, scientists say, is that there are many other factors involved. Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.

“I think everyone would agree that potentially the warming Arctic could have impacts on the lower latitudes,” said Rick Thoman, climate services manager with the National Weather Service in Fairbanks, Alaska. “But the exact connection on the climate scale is an area of active research.”

Much of the Northern Hemisphere is cold this time of year (it’s winter, after all). Cold snaps have occurred throughout history – certainly long before industrialization resulted in large emissions of greenhouse

gases. And as with any single weather event, it's difficult to directly attribute the influence of climate change to a particular cold spell.

But scientists have been puzzled by data that at first seems counterintuitive: Despite an undeniable overall year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century.

"We're trying to understand these dynamic processes that lead to cold winters," Ms. Kretschmer said.

"The changes in very persistent weak states actually contributed to cold outbreaks in Eurasia," Ms. Kretschmer said. "The bigger question is how this is related to climate change." When we have a weak temperature gradient between the Arctic and mid-latitudes, the result is weaker winds.

Ordinarily the jet stream is straight, blowing from west to east. When it becomes weaker, it can become wavy, more like a big snake around the Northern Hemisphere.

The weaker winds are more susceptible to disturbances, such as a zone of high pressure that can force colder air southward. These "blocking" high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.

The current cold snap has been in place for more than a week, and the cold air on Wednesday was moving east and colliding with a mass of warmer air from the Atlantic Ocean. That created a storm known as a "bomb cyclone."

In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term "explosive" — drop in atmospheric pressure. The air starts to move and, aided by the earth's rotation, begins to rotate. The swirling air can bring high winds and a lot of precipitation, often in the form of snow.

That could happen this time — depending on the track of the storm, parts of the Northeast were expecting heavy snow. But one impact of the storm is even more clear: After it eventually moves off to the north and west, it should draw even more cold polar air into the eastern half of the United States, continuing the big chill.

---

Q.17

Which of the following is true in the light of the passage?

- 1 ☐ Industrialisation is the sole cause behind global warming.
- 2 ☐ The bomb cyclone is an isolated US phenomenon.
- 3 ☐ Climate change can influence distribution of human beings.
- 4 ☐ Cold snaps may take place with or without drastic climate changes.





**Solution:**

**Correct Answer : 4**

**Your Answer : 4**

**Genre: Environmental Studies**

**Word Count# 618**

In the passage it is stated that, 'Cold snaps have occurred throughout history — certainly long before industrialization resulted in large emissions of greenhouse gases. And as with any single weather event, it's difficult to directly attribute the influence of climate change to a particular cold spell.' So, option 4 is the correct answer.

Option 1 – 'Sole cause' is incorrect according to the passage.

Option 2 – It's part of a series of events; it's surely not an isolated phenomenon.

Option 3 – 'Distribution of human beings' can't be verified from this passage.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions (13 to18):** The passage below is accompanied by a set of six questions. Choose the best answer to each question.

As bitter cold continues to grip much of North America and helps spawn the fierce storm along the East Coast, the question arises: What's the influence of climate change?

Some scientists studying the connection between climate change and cold spells, which occur when cold Arctic air dips south, say that they may be related. But the importance of the relationship is not fully clear yet.

The Arctic is not as cold as it used to be — the region is warming faster than any other — and studies suggest that this warming is weakening the jet stream, which ordinarily acts like a giant lasso, corralling cold air around the pole.

"There's a lot of agreement that the Arctic plays a role, it's just not known exactly how much," said Marlene Kretschmer, a researcher at the Potsdam Institute for Climate Impact Research in Germany. "It's a very complex system."

The reason a direct connection between cold weather and global warming is still up for debate, scientists say, is that there are many other factors involved. Ocean temperatures in the tropics, soil moisture, snow cover, even the long-term natural variability of large ocean systems all can influence the jet stream.

"I think everyone would agree that potentially the warming Arctic could have impacts on the lower latitudes," said Rick Thoman, climate services manager with the National Weather Service in Fairbanks, Alaska. "But the exact connection on the climate scale is an area of active research."

Much of the Northern Hemisphere is cold this time of year (it's winter, after all). Cold snaps have occurred throughout history — certainly long before industrialization resulted in large emissions of greenhouse gases. And as with any single weather event, it's difficult to directly attribute the influence of climate change to a particular cold spell.

But scientists have been puzzled by data that at first seems counterintuitive: Despite an undeniable overall year-round warming trend, winters in North America and Europe have trended cooler over the past quarter-century.

“We’re trying to understand these dynamic processes that lead to cold winters,” Ms. Kretschmer said.

“The changes in very persistent weak states actually contributed to cold outbreaks in Eurasia,” Ms. Kretschmer said. “The bigger question is how this is related to climate change.” When we have a weak temperature gradient between the Arctic and mid-latitudes, the result is weaker winds.

Ordinarily the jet stream is straight, blowing from west to east. When it becomes weaker, it can become wavy, more like a big snake around the Northern Hemisphere.

The weaker winds are more susceptible to disturbances, such as a zone of high pressure that can force colder air southward. These “blocking” high-pressure zones are often what creates a severe cold spell that lingers for several days or longer.

The current cold snap has been in place for more than a week, and the cold air on Wednesday was moving east and colliding with a mass of warmer air from the Atlantic Ocean. That created a storm known as a “bomb cyclone.”

In a bomb cyclone, the temperature difference between the two air masses leads to a steep and rapid — meteorologists often use the term “explosive” — drop in atmospheric pressure. The air starts to move and, aided by the earth’s rotation, begins to rotate. The swirling air can bring high winds and a lot of precipitation, often in the form of snow.

That could happen this time — depending on the track of the storm, parts of the Northeast were expecting heavy snow. But one impact of the storm is even more clear: After it eventually moves off to the north and west, it should draw even more cold polar air into the eastern half of the United States, continuing the big chill.

---

Q.18

What is Ms. Kretschmer’s tone towards the causes of cold spells?

1 ☐ Definitive and objective

2 ☐ Concerned and temperate

3 ☐ Analytical and uncertain

4 ☐ Exuberant and optimistic

---

**Solution:**

**Correct Answer : 3**

**Genre: Environmental Studies**

**Word Count# 618**

The passage rationally explains the phenomenon of cold snaps. So, option 3 is correct. The word ‘uncertain’ looks vague but this is the best option.

Option 1 – The author is not definitive. S/he is still speculating about the cause.

Option 2 – ‘Temperate’ is a vague term.

Option 3- Exuberant means lively. It doesn’t make any sense with respect to this passage.

FeedBack

 **Bookmark**

 **Answer key/Solution**

---

Directions for questions (19 to 21): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

Most scientists accept that humanity is now influencing our planet in ways that match geological forces such as tectonic plate movements. We are mining the planet's surface, acidifying our oceans, creating new rock layers laced with plastic; and exterminating many species. The consequences of all these actions will be detectable in rocks for millions of years. This new epoch has been named the Anthropocene.

However, scientists disagree about the date on which the Anthropocene began. Some say it started with the explosion of the first atomic bombs, events that triggered a technological revolution while also leaving radioactive records in Earth's rocks. Others say it is more recent in origin and point to plastics that now cover the planet and which, mixed with rocks, are forming their own distinct geological layers. Either way, the Anthropocene's origins are viewed as being relatively recent.

But Lewis and Maslin disagree. They point to a far earlier event: the colonisation of the New World by European explorers, soldiers and settlers in the 16th century.

"The arrival of Europeans, in particular the British and Spanish, had a profound impact on central and southern America," Maslin said. "They carried germs for smallpox, measles, flu, typhoid and many other diseases that led to the deaths of more than 50 million Americans – who had no previous exposure to these pathogens – within a few decades. Society in America collapsed and subsistence farming there was wiped out."

Forests returned to land that had been abandoned by humans. "We can detect this in Antarctic ice cores," added Maslin. "These provide a history of the atmosphere for thousands of years and show carbon dioxide levels reached a distinct minimum around 1610 because forests, which are much better than farm crops at absorbing carbon dioxide, were now covering vastly increased areas of the American landscape – thanks to the eradication of the people who had once farmed there." This effect continued for decades until America's population of humans was restored.

---

Q.19

Which of the following is true about the main concern of the author?

- 
- 1 ☐ S/he describes the view that Anthropocene began in the 16th century itself with the colonisation of the New World.
- 
- 2 ☐ S/he describes various viewpoints about the origin of Anthropocene.
- 
- 3 ☐ S/he advocates that Anthropocene has a far earlier origin—the 16th century— than currently thought of.
- 
- 4 ☐ S/he advocates that the geological impact of Anthropocene on America is far reaching.
-

**Solution:**

**Correct Answer : 1**

**Genre: Anthropology / Geology**

**Word Count# 325**

The author's focus is on describing the view of Lewis and Maslin. There are no detailed discussions on the other views. So 2 can be eliminated.

The author herself does not 'advocate' anything. It objectively presents the view.

4 is not the focus of the passage, the issue at hand is the 'origin' of Anthropocene.

1 is the best choice.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions (19 to 21): The passage below is accompanied by a set of three questions. Choose the best answer to each question.**

Most scientists accept that humanity is now influencing our planet in ways that match geological forces such as tectonic plate movements. We are mining the planet's surface, acidifying our oceans, creating new rock layers laced with plastic; and exterminating many species. The consequences of all these actions will be detectable in rocks for millions of years. This new epoch has been named the Anthropocene.

However, scientists disagree about the date on which the Anthropocene began. Some say it started with the explosion of the first atomic bombs, events that triggered a technological revolution while also leaving radioactive records in Earth's rocks. Others say it is more recent in origin and point to plastics that now cover the planet and which, mixed with rocks, are forming their own distinct geological layers. Either way, the Anthropocene's origins are viewed as being relatively recent.

But Lewis and Maslin disagree. They point to a far earlier event: the colonisation of the New World by European explorers, soldiers and settlers in the 16th century.

"The arrival of Europeans, in particular the British and Spanish, had a profound impact on central and southern America," Maslin said. "They carried germs for smallpox, measles, flu, typhoid and many other diseases that led to the deaths of more than 50 million Americans – who had no previous exposure to these pathogens – within a few decades. Society in America collapsed and subsistence farming there was wiped out."

Forests returned to land that had been abandoned by humans. "We can detect this in Antarctic ice cores," added Maslin. "These provide a history of the atmosphere for thousands of years and show carbon dioxide levels reached a distinct minimum around 1610 because forests, which are much better than farm crops at absorbing carbon dioxide, were now covering vastly increased areas of the American landscape – thanks to the eradication of the people who had once farmed there." This effect continued for decades until America's population of humans was restored.

**Q.20**

**It can be inferred from the passage that:**

1 ☐ Anthropocene began with the colonisation of the New World by Europeans in the 16th century.

2 ☐ intense geological changes brought about by humans heralded Anthropocene.

3 ☐ before 1610, the carbon dioxide levels in America were high.

4 ☐ Anthropocene's origins are relatively recent.

**Solution:**

**Correct Answer : 2**

**Genre: Anthropology / Geology**

**Word Count# 325**

Anthropocene's origin is a subject of debate. The passage just mentions various viewpoints on it. 1 and 4 are thus rejected.

The last paragraph just says that the CO2 levels reached their minimum in 1610. We can't infer whether they were high or low prior to that.

2 can be inferred from both the first and the second paragraph.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions (19 to 21): The passage below is accompanied by a set of three questions. Choose the best answer to each question.**

Most scientists accept that humanity is now influencing our planet in ways that match geological forces such as tectonic plate movements. We are mining the planet's surface, acidifying our oceans, creating new rock layers laced with plastic; and exterminating many species. The consequences of all these actions will be detectable in rocks for millions of years. This new epoch has been named the Anthropocene.

However, scientists disagree about the date on which the Anthropocene began. Some say it started with the explosion of the first atomic bombs, events that triggered a technological revolution while also leaving radioactive records in Earth's rocks. Others say it is more recent in origin and point to plastics that now cover the planet and which, mixed with rocks, are forming their own distinct geological layers. Either way, the Anthropocene's origins are viewed as being relatively recent.

But Lewis and Maslin disagree. They point to a far earlier event: the colonisation of the New World by European explorers, soldiers and settlers in the 16th century.

"The arrival of Europeans, in particular the British and Spanish, had a profound impact on central and southern America," Maslin said. "They carried germs for smallpox, measles, flu, typhoid and many other diseases that led to the deaths of more than 50 million Americans – who had no previous exposure to these pathogens – within a few decades. Society in America collapsed and subsistence farming there was wiped out."

Forests returned to land that had been abandoned by humans. "We can detect this in Antarctic ice cores," added Maslin. "These provide a history of the atmosphere for thousands of years and show carbon dioxide levels reached a distinct minimum around 1610 because forests, which are much better than farm crops at absorbing carbon dioxide, were now covering vastly increased areas of the American landscape – thanks to the eradication of the people who had once farmed there." This effect continued for decades until America's population of humans was restored.

**Q.21**

**Which of the following is surely not true about the author of the passage?**

1 ☐ He is a Geologist.

2 ☐ He is interested in the subject Anthropology.

---

3 ☐ He supports the climate change deniers' viewpoints.

---

4 ☐ He adopts a reporting style of data analysis in the passage.

---

**Solution:**

**Correct Answer : 3**

**Genre: Anthropology / Geology**

**Word Count# 325**

**The clue here is – surely not true.**

**Option 1 – The author can be a geologist. It's after all a passage on Geology.**

**Option 2 – The author can be interested in Anthropology. We can't definitively negate it.**

**Option 3 – S/he clearly doesn't support the viewpoints of the climate change deniers. If s/he were supporting such claims, the focus on global warming and climate change would have been missing from the passage.**

**Option 4 – The tone of the passage actually supports this option.**

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

**Directions for questions (22 to24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.**

**My obsession with the typewriter began when I learned to type in the seventh grade. I had hoped to take girls' glee as one of my elective junior high classes, but my mother, in her infinite wisdom, put the kibosh on that and insisted I take typewriting from Mrs. Moffatt. After school, I would practice on my mother's manual typewriter, a Royal Quiet De Luxe model that she had purchased in 1948. How I loved that hefty little machine, the smell of the ribbon ink, the feel of the round glass keys, and the look of its sturdy, nubby-textured case.**

**For some reason, my mother's typewriter went missing in the late '90s when she moved from our family home to a condominium. How this happened is unclear as my mother was a maven in the fine art of hoarding. So, I was overjoyed when I discovered that one of my college friends was married to a guy who collects, restores, and sells, among other things, old typewriters. I asked him to keep a lookout for the Royal Quiet De Luxe and later jumped at the chance to buy the exact model of my mother's when he tracked one down for me.**

**Fast forward to 2018. Time to make good on that New Year's resolution and get cracking on my overdue blog post. So, I took the Royal out of its case, placed it gently on my dining room table, lovingly rolled in a fresh piece of paper, placed my fingers on the HOME keys, and began to type.**

---

**Q.22**

**The writer's mother lost her typewriter when:**

---

1 ☐ she moved to another city.

---

2 ☐ she moved to a cooperative.

---

3 ☐ she moved to a separate block.

---

4 ☐ she lost her interest in the fine art of hoarding.

---

**Solution:**

**Correct Answer : 2**

**Genre: Autobiography / Memoir**

**Word Count# 258**

**Refer to-“ ... my mother’s typewriter went missing in the late ‘90s when she moved from our family home to a condominium.” The word condominium her means an apartment block or a cooperative. Hence 2 is the correct answer.**

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions (22 to24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.**

**My obsession with the typewriter began when I learned to type in the seventh grade. I had hoped to take girls’ glee as one of my elective junior high classes, but my mother, in her infinite wisdom, put the kibosh on that and insisted I take typewriting from Mrs. Moffatt. After school, I would practice on my mother’s manual typewriter, a Royal Quiet De Luxe model that she had purchased in 1948. How I loved that hefty little machine, the smell of the ribbon ink, the feel of the round glass keys, and the look of its sturdy, nubby-textured case.**

**For some reason, my mother’s typewriter went missing in the late ‘90s when she moved from our family home to a condominium. How this happened is unclear as my mother was a maven in the fine art of hoarding. So, I was overjoyed when I discovered that one of my college friends was married to a guy who collects, restores, and sells, among other things, old typewriters. I asked him to keep a lookout for the Royal Quiet De Luxe and later jumped at the chance to buy the exact model of my mother’s when he tracked one down for me.**

**Fast forward to 2018. Time to make good on that New Year’s resolution and get cracking on my overdue blog post. So, I took the Royal out of its case, placed it gently on my dining room table, lovingly rolled in a fresh piece of paper, placed my fingers on the HOME keys, and began to type.**

**Q.23**

**All of the following are true as far as the given passage is concerned except:**

- 1 ☐ the author got back her mother’s lost type writer via a friend’s husband.
- 2 ☐ the author found the weight and ribbon of the typewriter part of its charm.
- 3 ☐ Mrs. Moffat’s class was not the author’s first choice.
- 4 ☐ the author’s new year resolution included writing.

×

**Solution:**

**Correct Answer : 1**

**Your Answer : 3**

**Genre: Autobiography / Memoir**

**Word Count# 258**

**All other options except option 1 are correct.**

**Option 1 - Refer to-"... when I discovered that one of my college friends was married to a guy who collects, restores, and sells, among other things, old typewriters. I asked him to keep a lookout for the Royal Quiet De Luxe and later jumped at the chance to buy the exact model of my mother's when he tracked one down for me." So, we can't say that the author got back the same typewriter. It was of the same model.**

**Option 2 – Refer to the line – "How I loved that hefty little machine, the smell of the ribbon ink, the feel of the round glass keys, and the look of its sturdy, nubby-textured case."**

**Option 3 – Refer to the line – "I had hoped to take girls' glee as one of my elective junior high classes, but my mother, in her infinite wisdom, put the kibosh on that and insisted I take typewriting from Mrs. Moffatt."**

**Option 4 – Refer to the line – "Time to make good on that New Year's resolution and get cracking on my overdue blog post." Blogging is a type of writing.**

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions (22 to24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.**

**My obsession with the typewriter began when I learned to type in the seventh grade. I had hoped to take girls' glee as one of my elective junior high classes, but my mother, in her infinite wisdom, put the kibosh on that and insisted I take typewriting from Mrs. Moffatt. After school, I would practice on my mother's manual typewriter, a Royal Quiet De Luxe model that she had purchased in 1948. How I loved that hefty little machine, the smell of the ribbon ink, the feel of the round glass keys, and the look of its sturdy, nubby-textured case.**

**For some reason, my mother's typewriter went missing in the late '90s when she moved from our family home to a condominium. How this happened is unclear as my mother was a maven in the fine art of hoarding. So, I was overjoyed when I discovered that one of my college friends was married to a guy who collects, restores, and sells, among other things, old typewriters. I asked him to keep a lookout for the Royal Quiet De Luxe and later jumped at the chance to buy the exact model of my mother's when he tracked one down for me.**

**Fast forward to 2018. Time to make good on that New Year's resolution and get cracking on my overdue blog post. So, I took the Royal out of its case, placed it gently on my dining room table, lovingly rolled in a fresh piece of paper, placed my fingers on the HOME keys, and began to type.**

**Q.24**

**What can be said about the author's New Year's resolution?**

- 1 ☐ The author decided to inaugurate her mother's lost typewriter.
- 2 ☐ The author decided to write a blog using the Royal.
- 3 ☐ The author decided to fulfill her mother's wishes.
- 4 ☐ The author was delighted to be finally able to use the Royal.





**Solution:**

**Correct Answer : 2**

**Your Answer : 2**

**Genre: Autobiography / Memoir**

**Word Count# 258**

Refer to the last paragraph. "Fast forward to 2018. Time to make good on that New Year's resolution and get cracking on my overdue blog post. So, I took the Royal out of its case, placed it gently on my dining room table, lovingly rolled in a fresh piece of paper, placed my fingers on the HOME keys, and began to type." Hence 2 is the correct answer.

Option 1 – It is not the same typewriter. So, this is not definitely true.

Option 3 – Nothing has been mentioned about 'her mother's wishes' except the bit about the author taking a typewriting class. The two events are not directly related.

Option 4 – There is no data given regarding 'finally being able to use'. The author could have used it before. She just didn't.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Q.25**

**Directions for question 25: The passage given below is followed by four summaries. Choose the option that best captures the author's position.**

**Why might hugs be beneficial? Being hugged leads to release of the hormone oxytocin, setting off a range of downstream outcomes that could explain the benefits of hugging. Oxytocin is involved in a complex range of social processes, but has been implicated romantic bonding and trust. Other research suggests the benefits of hugs and affectionate touch more generally rest within the cardiovascular system. One study found lower systolic blood pressure in the husbands of couples asked to increase the frequency of affectionate touch with one another. Other research documents lowered blood pressure and heart rate among women who receive frequent hugs.**

- 1. Hugs are beneficial because they release Oxytocin leading to a better Cardiovascular system and lower blood pressure.**
- 2. Hugs have been shown to have emotional, psychological, and physiological benefits.**
- 3. Hugs are beneficial as they lead to release of Oxytocin and are associated with lower blood pressure and heart rate.**
- 4. Hugs improve romantic bonding and trust and result in a faster drop in blood pressure and heart rate.**



**Solution:**

**Correct Answer : 3**

**Your Answer : 3**

1 is incorrect as Oxytocin is not mentioned to affect the Cardiovascular system or blood pressure.

2 is incorrect because the word 'shown' is too definitive. The research mentioned in the paragraph is only suggestive, not conclusive.

3 captures all the benefits.

4 is incorrect because of 'faster drop'.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Q.26**

**Directions for question 26:** The passage given below is followed by four summaries. Choose the option that best captures the author's position.

**Ex nihilo nihil fit:** Nothing comes out of nothing. This principle is an expression of our inability to believe that something could just spring into existence or happen without a cause. Imagine that a glass on a table suddenly exploded. Even if you don't have the slightest idea what caused the glass to behave in that manner, you'll still assume that something must have caused it. If it isn't necessary that events are caused by something, then anything would be possible. But if anything were possible, then we couldn't act anymore, because in order to act effectively, we must be able to trust in the reliability of causal relations. So we're certain that there's a reason why the glass exploded. And if there's nothing else, we will rather believe in supernatural causes than believe there's no cause at all. We are certain that something must have caused it, whatever it is.

1. 'Nothing comes out of nothing' indicates a cause behind everything.

2. Because of their need to believe in the reliability of causal relations, human beings assume that there is a cause behind everything.

3. Human beings assume that there is a cause behind everything because they need order to act effectively.

4. Human beings are unable to believe that something could happen without a cause and are willing to assign even supernatural causes to things.

×

**Solution:**

**Correct Answer : 2**

**Your Answer : 4**

1 does not cover the paragraph.

The paragraph states the inability of human beings to believe that something could exist without a cause and the reason behind this inability. This is captured in 2.

3 twists the details of the para, human beings don't need 'order', they need trust in the reliability of causal relations.

4 doesn't capture the reason behind humans' inability.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

### Q.27

Directions for question 27: The passage given below is followed by four summaries. Choose the option that best captures the author's position.

The cryptocurrencies are a statement of faith in a new community of entrepreneurial cosmopolitans who hold themselves above national governments, which are viewed as the drivers of a long train of inequality and war. And, as in the past, the public's fascination with cryptocurrencies is tied to a sort of mystery, like the mystery of the value of money itself, consisting in the new money's connection to advanced science. Practically no one, outside of computer science departments, can explain how cryptocurrencies work. That mystery creates an aura of exclusivity, gives the new money glamour, and fills devotees with revolutionary zeal. None of this is new, and, as with past monetary innovations, a compelling story may not be enough.

1. Cryptocurrencies capture the public's fascination because of the mystery attached to them.
2. Perceived as revolutionary by entrepreneurs and mysterious by the public, cryptocurrencies are old wine in new bottle.
3. Cryptocurrencies, though perceived as incomprehensible, are viewed as revolutionary and liberating.
4. Perceived as mysterious and revolutionary, cryptocurrencies might not offer anything new.

Solution:

Correct Answer : 4

1 and 3, at best, capture only a part of the paragraph. So they are incomplete. 2 is too definitive in calling Crypto old wine in new bottle. The 'might' in 4 makes it the preferred choice.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

### Q.28

Directions for question 28: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. Whatever the reason, writers have always lingered on the spots of high colour on pale cheeks, the over-bright eyes, fevered brow and emaciated frame of, say, Marguerite Gautier in the younger Alexandre Dumas's work translated as Camille.
  2. Yet consumption has been traditionally associated with the romantic and the creative.
  3. Not that it lost its spell for the early 20th century. From the sanatorium in Thomas Mann's Magic Mountain to the tribulations and elations of its medical treatment in A.J. Cronin's The Citadel, tuberculosis seems as difficult to shake off in the imagination as in life.
  4. Consumption flourished in the novels of the 19th century: from those of Dostoyevsky and Victor Hugo to Dickens and Mrs Gaskell, to mention a few.
  5. Perhaps the predatory edge of art is honed on the tragic treasures generated by early death, star-crossed love and the reflections prompted by the progression to an untimely end.
-

**Solution:**

**Correct Answer : 25143**

2 is the introductory sentence as it talks about the originating point of what we know as tuberculosis today. The 'yet' in the beginning shows that it is taken from the middle of a paragraph. However, 2 can't be placed anywhere else as no other sentence justifies 'yet'.

5 and 1 form a pair and comes next. 5 mentions how it has been associated with the romantic and the creative and 1 expands on it. 4 continues with the idea of writers. So, it comes next.

3 is the concluding sentence as it connects the disease with the association further.

Hence, 25143 is the correct sequence.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Q.29**

**Directions for question 29:** The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. It follows Mahfouz's introspective literary aesthetic that considers itself uniquely Egyptian, and yet, can only work within the shared universal language of the novel - one of humanity's great inventions.
2. The book chronologically arranges eighty-six short articles Mahfouz wrote after his retirement for his weekly current-affairs column *wijhat nazar* ("a point of view")
3. This book keeps reminding its reader of the absence of this novelistic vision as it offers a compilation of brief articles Mahfouz wrote for the daily *Al-Ahram*.
4. They cover a variety of topics quite resistant to any thematic grouping: religion, schooling and university education, political pluralism, national unity, corruption and bureaucracy, censorship, morality, media literacy, sedition, freethinking, and replies to readers' letters.
5. Civilization, for Naguib Mahfouz, is a strange vision of life that shimmers above the narrow, circuitous alleys of old Cairo.

**Solution:**

**Correct Answer : 51324**

5 and 1 form a pair and 5 is clearly the introductory sentence. 5 mentions how Mahfouz envisions civilisation. The 'It' mentioned in 1 is the Mahfouz's vision. 3 comes next as it mentions how the book lacks the novelistic vision. 2 comes next as 'the book' refers to the idea mentioned in 3. 4 is the concluding sentence as it charts the areas covered by the book.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

### Q.30

Directions for question 30: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. The author rightly points out that Marx's project of Capital remained incomplete, as he could not touch upon the question of state, foreign trade and the world market, and so the answer to the question relating to the stubborn resilience of capitalism in the form of neo-liberalism may not be directly traced to Marx.
2. What, however, requires to be analysed is how neo-liberalism legitimizes itself by securing the consent of the governed, thereby making it easy for the Right to score its victory.
3. He points out further that the main levers of neo-liberalism being speculative capital, new technology and usurpation of the peripheral zones of the world, the crisis it generates by intensification of mass discontent is almost insurmountable, the reason being the impossibility of the neo-liberal State to resort to the strategy of welfarism, as practised earlier.
4. In spite of bouts of crises, it is undeniable that capitalism has not collapsed; rather, it has established its credibility in the sense that, following the end of the Soviet era, no alternative system is in sight, at least in the immediate future.
5. So the question: is Capital still relevant?

Solution:

Correct Answer : 45132

4 and 5 form a pair and 4 is the introductory sentence to the paragraph. 4 talks about a situation far from the ideal and 5, shows how, despite the scenario, the situation demands a more nuanced approach. 1 comes next as it mentions that as of now there are no alternatives to capitalism. 3 and 2 again form a pair and 2 is the concluding sentence.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

### Q.31

Directions for question 31: The five sentences (labelled 1, 2, 3, 4, 5) given in this question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

1. If an overweight person drinks 480ml of grape juice every day for three months, both the waistline and insulin resistance will increase remarkably.
2. Although it is quite unlike processed cane sugar, fructose can be as harmful if you make a habit of drinking juice on a regular basis.
3. You are supposed to savour the fruit bite by bite one serving at a time, the fibre helping you feel full.
4. Fruits have plenty of fructose, a close cousin of the more familiar glucose.
5. A juice overload also raises the level of uric acid in the blood, which leads to gout.

Solution:

Correct Answer : 42351

4 and 2 form a pair and 4 is clearly the opening sentence of the paragraph. 3 comes next as it mentions the proper and beneficial way of consuming fruits. 5 adds to the ideas mentioned in 3. 1 is the concluding sentence.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

---

### Q.32

Directions for question 32: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out.

1. This year, the WWF, which manages the initiative, hopes to build on its growing success and says millions of actions will be taken in at least 180 countries and territories.
2. For one hour every March since 2007, darkness has swept the globe as grassroots environmentalists, schools, offices and those responsible for some of the world's most iconic landmarks switch off lights in a symbolic call for more action on climate change.
3. An hour is not going to save the world – but a key message in publicizing the event is that every action counts and that energized individuals can make genuine change to the way we think about human impact on the planet.
4. We have raised awareness of both Earth Hour itself and the WWF aims and values locally within our community.
5. According to a record, 187 countries took part in the event's record breaking 10th year.

Solution:

Correct Answer : 4

The correct sequence is 2153. Sentence 2 opens the paragraph as it introduces the topic- 'switching of light for one hour every March by schools and offices'. 2 and 1 create a mandatory pair as 2 states what happens every year and 1 states what is going to happen this year. Moreover, 1 mentions 'initiative', which is a reference to the earth hour talked about in 2. 2 and 3 are also a mandatory pair as 3 refers to the same 'event'. 3 is the concluding sentence as it tells the importance of publicizing such an event. 4 is the odd sentence out as it uses a different tense. It talks about the awareness raised. However, 3 talks about the awareness that needs to be raised. 4 may come somewhere later in the passage.

🔖 Bookmark

🔑 Answer key/Solution

Feedback

---

### Q.33

Directions for question 33: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out.

1. In 2013, Garry Nolan concluded that Ata was human, but the reasons for the dramatic deformities were far from clear.
  2. Now scientists in California have extracted DNA from the mummy's bones and pieced together the real and tragic story of the individual, known as Ata.
  3. The skeleton, which was sold to a private collector in Spain, was so bizarre it appeared in a documentary as potential evidence for alien life.
  4. When the mummified remains of a six-inch humanoid were found in an abandoned mining town in Chile's Atacama desert 15 years ago, speculation on its origins ran wild.
  5. Rather than a visitor from another world, Ata was a girl who appears to have been stillborn, or to have died immediately after birth, with devastating mutations that shaped her extraordinary body.
-

**Solution:**

**Correct Answer : 1**

The correct sequence is 4325. Statement 4 comes first as it introduces the topic- mummified remains of a humanoid. 4 and 3 form a mandatory pair as 3 further talks about the skeleton (which was the mummified remain). Next comes 2 as it tells whose skeleton was it actually of- ATA. 2 and 5 are a mandatory pair as 5 is simply an explanation of ATA. 1 might come later somewhere in the paragraph, as it introduces another person Garry Nolan, about whom we have no idea. Hence, 1 is the odd sentence out.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

### Q.34

Directions for question 34: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out.

1. Micro plastics are particles of less than 5 mm that enter the environment either as primary industrial products, such as those used in scrubbers and cosmetics, or via urban waste water and broken-down elements of articles discarded by consumers.
2. There is little doubt that the global production of plastics, at over 300 million tonnes a year according to the UN Environment Programme, has overwhelmed the capacity of governments to handle what is thrown away as waste.
3. Waste separation can be achieved in partnership with the community, and presents a major employment opportunity
4. Plastics are now widely present in the environment, as visible waste along coastlines, in lakes and rivers, and even in the soil.
5. The recent finding that micro plastic particles are found even in 'safe' bottled water indicates the magnitude of the crisis.

**Solution:**

**Correct Answer : 3**

The given paragraph can be logically arranged in the order 4521(3), where sentence 3 is the odd one out. Other than 3, all other sentences talk about the growing crisis due to plastic consumption and the magnitude of its crisis. Sentence 3 imposes a solution which may look as if it is a part of the same argument but is not directly related to the context of the given paragraph.

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

## Sec 2

---

Directions for question 35 to 38: Answer the questions on the basis of the information given below.

Shasha, a restobar owner, observed the drinking habits of the people who visited his restobar last week. The restobar serves alcoholic drinks of only 3 types – whiskey, vodka and beer. Not all his customers necessarily drank alcoholic drinks but those who did, they had at least one of the 3 types among whiskey, beer and vodka.

Further, some of his observations during the last week are as follows:

- (i) For every 3 customers who drank only whiskey, there was 1 customer who drank only beer and vodka.
- (ii) For every 3 customers who drank beer, there was 1 customer who drank vodka and beer, and for every 3 customers who drank vodka, there was 1 customer who drank whiskey and vodka.
- (iii) The number of customers who drank only beer was twice the number of customers who drank only vodka.
- (iv) The number of customers who drank both beer and vodka was 24 more than twice the number of customers who drank only vodka and whiskey.
- (v) The number of customers who drank only whiskey and beer was 28.

---

**Q.35**

What can be the minimum number of customers who visited the restaurant during the week?

**Solution:**

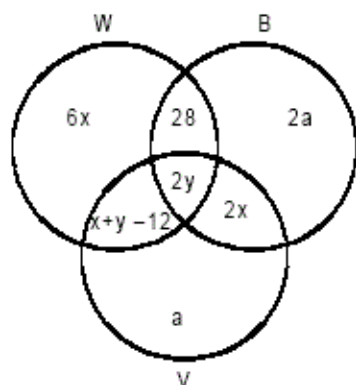
**Correct Answer : 133**

 **Bookmark**

 **Answer key/Solution**



W denotes the number of customers who drink whiskey  
 B denotes the number of customers who drink beer  
 V denotes the number of customers who drink vodka  
 Using points (i), (iii), (iv) and (v), we can get the below venn-diagram.



Now, using point (ii), we get

$$2x + 2y + 2a + 28 = 3(2x + 2y) \quad \dots(1)$$

$$\Rightarrow 2x + 2y = a + 14$$

$$\text{and } 3x + 3y + a - 12 = 3(3y + x - 12) \quad \dots(2)$$

$$\Rightarrow 6y = a + 24$$

$$\text{Putting value of } y \text{ from (2) in (1), we get} \quad \dots(3)$$

$$3x = a + 9$$

So, number of customers who drink at least one of the 3 alcoholic drinks

$$= 9x + 3y + 3a + 16 = \frac{13}{2}a + 55$$

(i.e putting x and y in terms of a)

$$\text{Also, } y = \frac{a}{6} + 4 \text{ \& } x = \frac{a}{3} + 3$$

Since x and y are number of people, it has to be a whole number for which 'a' has to be a multiple of 6.

For a	6	12	18	24	30
x	5	7	9	11	13
y	5	6	7	8	9
Those who drink atleast one of 3 types of alcoholic drink	94	133	172	211	250

For a = 6, the region of only whiskey and vodka would become negative. Hence, not possible. So, minimum value of 'a' can be 12.

Minimum number of customers who visited during the week = minimum number of customers who drank at least one of the 3 types = 133.

FeedBack

---

Directions for question 35 to 38: Answer the questions on the basis of the information given below.

Shasha, a restobar owner, observed the drinking habits of the people who visited his restobar last week. The restobar serves alcoholic drinks of only 3 types – whiskey, vodka and beer. Not all his customers necessarily drank alcoholic drinks but those who did, they had at least one of the 3 types among whiskey, beer and vodka.

Further, some of his observations during the last week are as follows:

- (i) For every 3 customers who drank only whiskey, there was 1 customer who drank only beer and vodka.
- (ii) For every 3 customers who drank beer, there was 1 customer who drank vodka and beer, and for every 3 customers who drank vodka, there was 1 customer who drank whiskey and vodka.
- (iii) The number of customers who drank only beer was twice the number of customers who drank only vodka.
- (iv) The number of customers who drank both beer and vodka was 24 more than twice the number of customers who drank only vodka and whiskey.
- (v) The number of customers who drank only whiskey and beer was 28.

---

**Q.36**

If the total number of customers visited restobar during the week was 250, then what could be the minimum number of customers who did not drink any of the 3 alcoholic drinks?

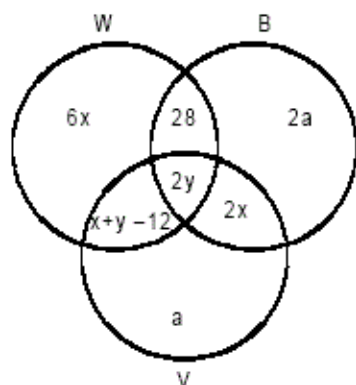
**Solution:**

**Correct Answer : 0**

 **Bookmark**

 **Answer key/Solution**

W denotes the number of customers who drink whiskey  
 B denotes the number of customers who drink beer  
 V denotes the number of customers who drink vodka  
 Using points (i), (iii), (iv) and (v), we can get the below venn-diagram.



Now, using point (ii), we get

$$2x + 2y + 2a + 28 = 3(2x + 2y) \quad \dots(1)$$

$$\Rightarrow 2x + 2y = a + 14 \quad \dots(2)$$

$$\text{and } 3x + 3y + a - 12 = 3(3y + x - 12) \quad \dots(3)$$

$$\Rightarrow 6y = a + 24$$

Putting value of y from (2) in (1), we get

$$3x = a + 9 \quad \dots(3)$$

$$\text{So, number of customers who drink at least one of the 3 alcoholic drinks}$$

$$= 9x + 3y + 3a + 16 = \frac{13}{2}a + 55$$

(i.e putting x and y in terms of a)

$$\text{Also, } y = \frac{a}{6} + 4 \text{ \& } x = \frac{a}{3} + 3$$

Since x and y are number of people, it has to be a whole number for which 'a' has to be a multiple of 6.

For a	6	12	18	24	30
x	5	7	9	11	13
y	5	6	7	8	9
Those who drink atleast one of 3 types of alcoholic drink	94	133	172	211	250

For a = 6, the region of only whiskey and vodka would become negative. Hence, not possible. So, minimum value of 'a' can be 12.

If total visited customers were 250, then there is a possibility that all of them had at least one of the three mentioned drinks.

So, the required number is zero.

FeedBack

---

Directions for question 35 to 38: Answer the questions on the basis of the information given below.

Shasha, a restobar owner, observed the drinking habits of the people who visited his restobar last week. The restobar serves alcoholic drinks of only 3 types – whiskey, vodka and beer. Not all his customers necessarily drank alcoholic drinks but those who did, they had at least one of the 3 types among whiskey, beer and vodka.

Further, some of his observations during the last week are as follows:

- (i) For every 3 customers who drank only whiskey, there was 1 customer who drank only beer and vodka.
- (ii) For every 3 customers who drank beer, there was 1 customer who drank vodka and beer, and for every 3 customers who drank vodka, there was 1 customer who drank whiskey and vodka.
- (iii) The number of customers who drank only beer was twice the number of customers who drank only vodka.
- (iv) The number of customers who drank both beer and vodka was 24 more than twice the number of customers who drank only vodka and whiskey.
- (v) The number of customers who drank only whiskey and beer was 28.

---

**Q.37**

Which of the following could be a possible number of the customers who drank exactly 2 of the 3 types of alcoholic drinks?

---

1 ☐ 40

---

2 ☐ 50

---

3 ☐ 60

---

4 ☐ 70

---

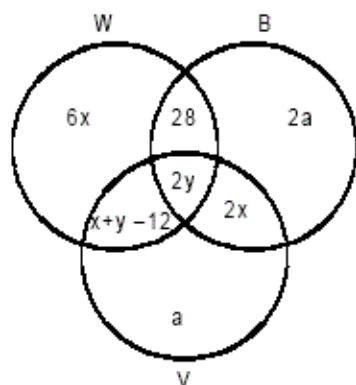
**Solution:**

**Correct Answer : 2**

 **Bookmark**

 **Answer key/Solution**

W denotes the number of customers who drink whiskey  
 B denotes the number of customers who drink beer  
 V denotes the number of customers who drink vodka  
 Using points (i), (iii), (iv) and (v), we can get the below venn-diagram.



Now, using point (ii), we get

$$2x + 2y + 2a + 28 = 3(2x + 2y) \quad \dots(1)$$

$$\Rightarrow 2x + 2y = a + 14 \quad \dots(2)$$

$$\text{and } 3x + 3y + a - 12 = 3(3y + x - 12) \quad \dots(3)$$

$$\Rightarrow 6y = a + 24$$

Putting value of y from (2) in (1), we get

$$3x = a + 9$$

$$\text{So, number of customers who drink at least one of the 3 alcoholic drinks} = 9x + 3y + 3a + 16 = \frac{13}{2}a + 55$$

(i.e putting x and y in terms of a)

$$\text{Also, } y = \frac{a}{6} + 4 \text{ \& \; } x = \frac{a}{3} + 3$$

Since x and y are number of people, it has to be a whole number for which 'a' has to be a multiple of 6.

For a	6	12	18	24	30
x	5	7	9	11	13
y	5	6	7	8	9
Those who drink atleast one of 3 types of alcoholic drink	94	133	172	211	250

For a = 6, the region of only whiskey and vodka would become negative. Hence, not possible. So, minimum value of 'a' can be 12.

Number of customers who drank exactly 2 of the 3 types of drinks =  $28 + 2x + x + y - 12 = 3x + y + 16$

Putting different values of x and y from above table,

Only by x = 9 and y = 7

We get  $3x + y + 16 = 50$ .

Feedback

---

Directions for question 35 to 38: Answer the questions on the basis of the information given below.

Shasha, a restobar owner, observed the drinking habits of the people who visited his restobar last week. The restobar serves alcoholic drinks of only 3 types – whiskey, vodka and beer. Not all his customers necessarily drank alcoholic drinks but those who did, they had at least one of the 3 types among whiskey, beer and vodka.

Further, some of his observations during the last week are as follows:

- (i) For every 3 customers who drank only whiskey, there was 1 customer who drank only beer and vodka.
- (ii) For every 3 customers who drank beer, there was 1 customer who drank vodka and beer, and for every 3 customers who drank vodka, there was 1 customer who drank whiskey and vodka.
- (iii) The number of customers who drank only beer was twice the number of customers who drank only vodka.
- (iv) The number of customers who drank both beer and vodka was 24 more than twice the number of customers who drank only vodka and whiskey.
- (v) The number of customers who drank only whiskey and beer was 28.

---

**Q.38**

What is the difference between the number of customers who drank only whiskey and the number of customers who drank only beer?

---

1 ☐ 18

---

2 ☐ 16

---

3 ☐ 24

---


4 ☐ cannot be determined

---

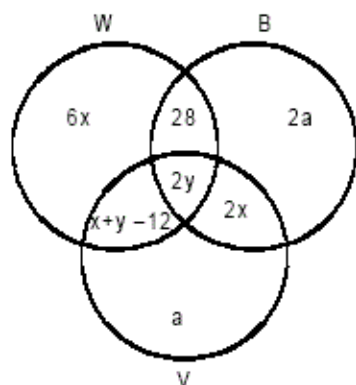
**Solution:**

**Correct Answer : 1**

 **Bookmark**

 **Answer key/Solution**

W denotes the number of customers who drink whiskey  
 B denotes the number of customers who drink beer  
 V denotes the number of customers who drink vodka  
 Using points (i), (iii), (iv) and (v), we can get the below venn-diagram.



Now, using point (ii), we get

$$2x + 2y + 2a + 28 = 3(2x + 2y) \quad \dots(1)$$

$$\Rightarrow 2x + 2y = a + 14$$

$$\text{and } 3x + 3y + a - 12 = 3(3y + x - 12) \quad \dots(2)$$

$$\Rightarrow 6y = a + 24$$

$$\text{Putting value of } y \text{ from (2) in (1), we get} \quad \dots(3)$$

$$3x = a + 9$$

$$\text{So, number of customers who drink at least one of the 3 alcoholic drinks}$$

$$= 9x + 3y + 3a + 16 = \frac{13}{2}a + 55$$

(i.e putting x and y in terms of a)

Also,  $y = \frac{a}{6} + 4$  &  $x = \frac{a}{3} + 3$

Since x and y are number of people, it has to be a whole number for which 'a' has to be a multiple of 6.

For a	6	12	18	24	30
x	5	7	9	11	13
y	5	6	7	8	9
Those who drink atleast one of 3 types of alcoholic drink	94	133	172	211	250

For a = 6, the region of only whiskey and vodka would become negative. Hence, not possible. So, minimum value of 'a' can be 12.

Number of customers who drank only whiskey = 6x

Number of customers who drank only beer = 2a

Therefore, difference = (6x - 2a) = 18 (using (3))

FeedBack

Directions for question 39 to 42: Answer the questions on the basis of the information given below.

Five football players of India were asked to rank 5 football teams - P, Q, R, S and T - of other countries from 1 to 5 as per their performances in last year's tournament, where rank 1 being the highest and rank 5 being the lowest. Team P was ranked same by all the five players while team Q was ranked same by exactly 4 players. Team R was given the same rank by 3 players and another same rank by 2 players. Team S was given the same rank by 3 players and two different ranks by the other 2 players and team T was ranked same by only 2 players and ranked different by the other 3. At the end, each team was assigned a final rank equivalent to the rank that was assigned to that team by maximum number of players. All five teams had different final ranks and final ranks of teams P, Q and R were 1, 2 and 3 respectively. Also, team R was ranked 4 by exactly two players. Each player had given a different ranking to each of the five teams.

Q.39

Which of the following ranks were given by a player to team Q?

1 ☐ 3

2 ☐ 4

3 ☐ 5

4 ☐ 4 or 5




**Solution:**

**Correct Answer : 3**

**Your Answer : 1**

 **Bookmark**

 **Answer key/Solution**



- (i) The final rank of team P was 1 and it was ranked same by all the five players, this implies that every player had given rank 1 to team P.
- (ii) The final rank of team Q was 2 and it was ranked same by exactly four players, it means exactly four players had given rank 2 to team Q.
- (iii) The final rank of team R was 3 and it was ranked same by three players so these three players must have given rank 3 to team R. Remaining two players had given rank 4 to team R which is given in the question.
- So, the table till now will be

	P	Q	R	S	T
Player 1	1	2	3		
Player 2	1	2	3		
Player 3	1	2	3		
Player 4	1	2	4		
Player 5	1		4		

Now, each player gave different ranking to each team.

The possible ranks which could be given to team T were 2, 3, 4 and 5.

Players 1, 2, 3 and 4 already gave rank 2 to team Q, therefore, the player 5 gave rank 2 to team T.

Now rank given by player 5 to team Q could be either 3 or 5. If we consider 3, then it will not satisfy the given conditions for team S and T. So, only possible rank for team Q given by player 5 would be 5.

For team S, the only possible rank is 4 or 5.

If we consider 4, this means 3 players would have given rank 4 to team S and other two had given different ranks.

	P	Q	R	S	T
Player 1	1	2	3	4	5
Player 2	1	2	3	4	5
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

→ Not possible

The above case is not possible. Team S had rank 4, implies that rank of team T would be 5. But it is given that Team T was ranked same by only 2 players and the final rank would be that which was assigned by maximum number of players. So rank 5 should be given by only two players but in the above case, rank 5 assigned to team T was possible by 3 players which is incorrect.

Hence, rank of team S and team T were 5 and 4 respectively.

So, according to the given conditions two cases are possible

**Case 1:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

**Case 2:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	4	5	3
Player 4	1	2	4	3	5
Player 5	1	5	3	4	2

Among the options rank 5 was given to team Q.

---

**Directions for question 39 to 42: Answer the questions on the basis of the information given below.**

Five football players of India were asked to rank 5 football teams - P, Q, R, S and T - of other countries from 1 to 5 as per their performances in last year's tournament, where rank 1 being the highest and rank 5 being the lowest. Team P was ranked same by all the five players while team Q was ranked same by exactly 4 players. Team R was given the same rank by 3 players and another same rank by 2 players. Team S was given the same rank by 3 players and two different ranks by the other 2 players and team T was ranked same by only 2 players and ranked different by the other 3. At the end, each team was assigned a final rank equivalent to the rank that was assigned to that team by maximum number of players. All five teams had different final ranks and final ranks of teams P, Q and R were 1, 2 and 3 respectively. Also, team R was ranked 4 by exactly two players. Each player had given a different ranking to each of the five teams.

---

**Q.40**

**How many players can rank team S as 4?**

**Solution:**

**Correct Answer : 1**

 **Bookmark**

 **Answer key/Solution**

- (i) The final rank of team P was 1 and it was ranked same by all the five players, this implies that every player had given rank 1 to team P.
- (ii) The final rank of team Q was 2 and it was ranked same by exactly four players, it means exactly four players had given rank 2 to team Q.
- (iii) The final rank of team R was 3 and it was ranked same by three players so these three players must have given rank 3 to team R. Remaining two players had given rank 4 to team R which is given in the question.
- So, the table till now will be

	P	Q	R	S	T
Player 1	1	2	3		
Player 2	1	2	3		
Player 3	1	2	3		
Player 4	1	2	4		
Player 5	1		4		

Now, each player gave different ranking to each team.

The possible ranks which could be given to team T were 2, 3, 4 and 5.

Players 1, 2, 3 and 4 already gave rank 2 to team Q, therefore, the player 5 gave rank 2 to team T.

Now rank given by player 5 to team Q could be either 3 or 5. If we consider 3, then it will not satisfy the given conditions for team S and T. So, only possible rank for team Q given by player 5 would be 5.

For team S, the only possible rank is 4 or 5.

If we consider 4, this means 3 players would have given rank 4 to team S and other two had given different ranks.

	P	Q	R	S	T
Player 1	1	2	3	4	5
Player 2	1	2	3	4	5
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

→ Not possible

The above case is not possible. Team S had rank 4, implies that rank of team T would be 5. But it is given that Team T was ranked same by only 2 players and the final rank would be that which was assigned by maximum number of players. So rank 5 should be given by only two players but in the above case, rank 5 assigned to team T was possible by 3 players which is incorrect.

Hence, rank of team S and team T were 5 and 4 respectively.

So, according to the given conditions two cases are possible

**Case 1:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

**Case 2:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	4	5	3
Player 4	1	2	4	3	5
Player 5	1	5	3	4	2

Only one player can rank team S as 4.

Directions for question 39 to 42: Answer the questions on the basis of the information given below.

Five football players of India were asked to rank 5 football teams - P, Q, R, S and T - of other countries from 1 to 5 as per their performances in last year's tournament, where rank 1 being the highest and rank 5 being the lowest. Team P was ranked same by all the five players while team Q was ranked same by exactly 4 players. Team R was given the same rank by 3 players and another same rank by 2 players. Team S was given the same rank by 3 players and two different ranks by the other 2 players and team T was ranked same by only 2 players and ranked different by the other 3. At the end, each team was assigned a final rank equivalent to the rank that was assigned to that team by maximum number of players. All five teams had different final ranks and final ranks of teams P, Q and R were 1, 2 and 3 respectively. Also, team R was ranked 4 by exactly two players. Each player had given a different ranking to each of the five teams.

Q.41

Find the sum of the two ranks given to the team S, which were different from the same rank given by the three players?

1 ☐ 6

2 ☐ 8

3 ☐ 7

4 ☐ 5

**Solution:**

**Correct Answer : 3**

 **Bookmark**

 **Answer key/Solution**

- (i) The final rank of team P was 1 and it was ranked same by all the five players, this implies that every player had given rank 1 to team P.
- (ii) The final rank of team Q was 2 and it was ranked same by exactly four players, it means exactly four players had given rank 2 to team Q.
- (iii) The final rank of team R was 3 and it was ranked same by three players so these three players must have given rank 3 to team R. Remaining two players had given rank 4 to team R which is given in the question.
- So, the table till now will be

	P	Q	R	S	T
Player 1	1	2	3		
Player 2	1	2	3		
Player 3	1	2	3		
Player 4	1	2	4		
Player 5	1		4		

Now, each player gave different ranking to each team.

The possible ranks which could be given to team T were 2, 3, 4 and 5.

Players 1, 2, 3 and 4 already gave rank 2 to team Q, therefore, the player 5 gave rank 2 to team T.

Now rank given by player 5 to team Q could be either 3 or 5. If we consider 3, then it will not satisfy the given conditions for team S and T. So, only possible rank for team Q given by player 5 would be 5.

For team S, the only possible rank is 4 or 5.

If we consider 4, this means 3 players would have given rank 4 to team S and other two had given different ranks.

	P	Q	R	S	T
Player 1	1	2	3	4	5
Player 2	1	2	3	4	5
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

→ Not possible

The above case is not possible. Team S had rank 4, implies that rank of team T would be 5. But it is given that Team T was ranked same by only 2 players and the final rank would be that which was assigned by maximum number of players. So rank 5 should be given by only two players but in the above case, rank 5 assigned to team T was possible by 3 players which is incorrect.

Hence, rank of team S and team T were 5 and 4 respectively.

So, according to the given conditions two cases are possible

**Case 1:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

**Case 2:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	4	5	3
Player 4	1	2	4	3	5
Player 5	1	5	3	4	2

The two different ranks which were different from the rest three same ranks were 4 and 3. So, sum is  $4 + 3 = 7$ .

Directions for question 39 to 42: Answer the questions on the basis of the information given below.

Five football players of India were asked to rank 5 football teams - P, Q, R, S and T - of other countries from 1 to 5 as per their performances in last year's tournament, where rank 1 being the highest and rank 5 being the lowest. Team P was ranked same by all the five players while team Q was ranked same by exactly 4 players. Team R was given the same rank by 3 players and another same rank by 2 players. Team S was given the same rank by 3 players and two different ranks by the other 2 players and team T was ranked same by only 2 players and ranked different by the other 3. At the end, each team was assigned a final rank equivalent to the rank that was assigned to that team by maximum number of players. All five teams had different final ranks and final ranks of teams P, Q and R were 1, 2 and 3 respectively. Also, team R was ranked 4 by exactly two players. Each player had given a different ranking to each of the five teams.

Q.42

Which of the following is the correct order of teams, when arranged in increasing order of the sum of the ranks given to them by the 5 players?

1 ☐ P, Q, R, S, T

2 ☐ P, Q, R, T, S

3 ☐ P, Q, T, R, S

4 ☐ Sum is same for two or more teams

**Solution:**

**Correct Answer : 2**

 **Bookmark**

 **Answer key/Solution**

- (i) The final rank of team P was 1 and it was ranked same by all the five players, this implies that every player had given rank 1 to team P.
- (ii) The final rank of team Q was 2 and it was ranked same by exactly four players, it means exactly four players had given rank 2 to team Q.
- (iii) The final rank of team R was 3 and it was ranked same by three players so these three players must have given rank 3 to team R. Remaining two players had given rank 4 to team R which is given in the question.

So, the table till now will be

	P	Q	R	S	T
Player 1	1	2	3		
Player 2	1	2	3		
Player 3	1	2	3		
Player 4	1	2	4		
Player 5	1		4		

Now, each player gave different ranking to each team.

The possible ranks which could be given to team T were 2, 3, 4 and 5.

Players 1, 2, 3 and 4 already gave rank 2 to team Q, therefore, the player 5 gave rank 2 to team T.

Now rank given by player 5 to team Q could be either 3 or 5. If we consider 3, then it will not satisfy the given conditions for team S and T. So, only possible rank for team Q given by player 5 would be 5.

For team S, the only possible rank is 4 or 5.

If we consider 4 this means 3 players would have given rank 4 to team S and other two had given different ranks

In the context of this means 3 players must have given rank 1 to team S and other two have given different ranks.

	P	Q	R	S	T
Player 1	1	2	3	4	5
Player 2	1	2	3	4	5
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

→ Not possible

The above case is not possible. Team S had rank 4, implies that rank of team T would be 5. But it is given that Team T was ranked same by only 2 players and the final rank would be that which was assigned by maximum number of players. So rank 5 should be given by only two players but in the above case, rank 5 assigned to team T was possible by 3 players which is incorrect.

Hence, rank of team S and team T were 5 and 4 respectively.

So, according to the given conditions two cases are possible

**Case 1:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	3	4	5
Player 4	1	2	4	5	3
Player 5	1	5	4	3	2

**Case 2:**

	P	Q	R	S	T
Player 1	1	2	3	5	4
Player 2	1	2	3	5	4
Player 3	1	2	4	5	3
Player 4	1	2	4	3	5
Player 5	1	5	3	4	2

The sum of the ranks assigned to each team by the five players were

For team P, sum is  $1 + 1 + 1 + 1 + 1 = 5$

For team Q, sum is  $2 + 2 + 2 + 2 + 5 = 13$

For team R, it is  $3 + 3 + 3 + 4 + 4 = 17$

For team S, it is  $5 + 5 + 5 + 4 + 3 = 22$

For team T, it is  $4 + 4 + 5 + 3 + 2 = 18$ .

∴ Correct order is P, Q, R, T, S.

Feedback



Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

A newly inaugurated drama school has organised some plays to introduce its director's and choreographer's capabilities in the city. They wanted to do this with a fresh batch of talent, hence decided to select actors from four different schools -  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$  - and trained them to act in their five different plays namely Birbal, Shakespeare, Romeo-Juliet, LOC and Charlie Chaplin. The table shown below gives the number of actors required in a play from the four schools. Also, it is known that maximum of 20, 15, 7 and 12 could have been selected from the schools  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$  respectively.

	Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
$S_1$	8	7	6	4	3
$S_2$	4	5	2	9	7
$S_3$	2	6	3	7	5
$S_4$	3	4	5	8	6

Q.43

At most how many actors were selected for all the 5 plays?

Solution:

Correct Answer : 10

From school  $S_1$ , the maximum number of actors required for play Charlie Chaplin is 3, which is minimum as compared to the number of actors required of other 4 plays. So, these 3 actors can participate in all 5 plays.

Similarly, from school  $S_2$ , the maximum number of actors who were selected for all 5 plays can be 2, from  $S_3$  it can be 2 and from  $S_4$  it can be 3.

So, total maximum number of actors selected for all 5 plays from 5 different schools =  $3 + 2 + 2 + 3 = 10$

FeedBack

Bookmark

Answer key/Solution

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

A newly inaugurated drama school has organised some plays to introduce its director's and choreographer's capabilities in the city. They wanted to do this with a fresh batch of talent, hence decided to select actors from four different schools -  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$  - and trained them to act in their five different plays namely Birbal, Shakespeare, Romeo-Juliet, LOC and Charlie Chaplin. The table shown below gives the number of actors required in a play from the four schools. Also, it is known that maximum of 20, 15, 7 and 12 could have been selected from the schools  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$  respectively.

	Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
$S_1$	8	7	6	4	3
$S_2$	4	5	2	9	7
$S_3$	2	6	3	7	5
$S_4$	3	4	5	8	6



## Q.44

At least how many actors were selected for more than one play in all the 4 schools taken together?

1 ☐ 162 ☐ 243 ☐ 264 ☐ 25**Solution:****Correct Answer : 1** **Bookmark** **Answer key/Solution**

In order to find the minimum number of actors selected for more than one play, one can count the maximum number of actors selected in exactly one play for all the 4 schools and then subtract it from total.

In school  $S_1$ , if two actors were selected who participated in all 5 plays and remaining were selected for exactly one play, then from each play we get the selected students as

$(6 + 2)$ ,  $(5 + 2)$ ,  $(4 + 2)$ ,  $(2 + 2)$ ,  $(1 + 2)$ , where the second number in bracket represents the actors selected in all five plays and first number represents the number of actors selected in only one play, for all the five plays from school  $S_1$ .

Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
8	7	6	4	3
$8 - 2 = 6$	$7 - 2 = 5$	$6 - 2 = 4$	$4 - 2 = 2$	$3 - 2 = 1$

Therefore, maximum number of actors selected for exactly one play from  $S_1 = 6 + 5 + 4 + 2 + 1 = 18$ .

So, minimum number of actors selected for more than one play =  $20 - 18 = 2$

For School  $S_2$ ,

If 2 actors were selected for all 5 plays, and 2 other were selected for 3 plays, then the number of (actors selected for 1 play, actors selected for 3 plays, actors selected for 5 plays) is as  $(0, 2, 2)$ ,  $(1, 2, 2)$ ,  $(0, 0, 2)$ ,  $(5, 2, 2)$ ,  $(5, 0, 2)$

Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
4	5	2	9	7
$4 - 2 = 2$	$5 - 2 = 3$	$2 - 2 = 0$	$9 - 2 = 7$	$7 - 2 = 5$
$2 - 2 = 0$	$3 - 2 = 1$	0	$7 - 2 = 5$	5

Therefore, maximum number of actors selected for exactly one play from  $S_2 = 11$ .

So, minimum number of actors selected for more than one play =  $15 - 11 = 4$

Similarly, for school  $S_3$ , we get maximum number of actors selected for only 1 play is 1.

Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
2	6	3	7	5
2	$6 - 3 = 3$	$3 - 3 = 0$	$7 - 3 = 4$	$5 - 3 = 2$
$2 - 2 = 0$	$3 - 2 = 1$	0	$4 - 2 = 2$	$2 - 2 = 0$
0	$1 - 1 = 0$	0	$2 - 1 = 1$	0

So, minimum number of actors selected for more than 1 play =  $7 - 1 = 6$

For School  $S_4$ ,

Maximum number of actors selected for only one play is 8.

Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
3	4	5	8	6
$3 - 2 = 1$	$4 - 2 = 2$	$5 - 2 = 3$	$8 - 2 = 6$	$6 - 2 = 4$
1	$2 - 2 = 0$	$3 - 2 = 1$	$6 - 2 = 4$	$4 - 2 = 2$

So, minimum number of actors selected for more than one play =  $12 - 8 = 4$

So, required number of actors selected from all the 4 schools =  $2 + 4 + 6 + 4 = 16$

[Feedback](#)

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

A newly inaugurated drama school has organised some plays to introduce its director's and choreographer's capabilities in the city. They wanted to do this with a fresh batch of talent, hence decided to select actors from four different schools -  $S_1, S_2, S_3, S_4$  - and trained them to act in their five different plays namely Birbal, Shakespeare, Romeo-Juliet, LOC and Charlie Chaplin. The table shown below gives the number of actors required in a play from the four schools. Also, it is known that maximum of 20, 15, 7 and 12 could have been selected from the schools  $S_1, S_2, S_3, S_4$  respectively.

	Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
$S_1$	8	7	6	4	3
$S_2$	4	5	2	9	7
$S_3$	2	6	3	7	5
$S_4$	3	4	5	8	6

Q.45

Find the sum of the maximum possible number of actors who could be selected for only one play from the schools  $S_1$  and  $S_2$ .

1 ☐ 29

2 ☐ 35

3 ☐ 30

4 ☐ 32

Solution:

Correct Answer : 1

As discussed in previous question, the maximum number of actors selected for one play from  $S_1$  and  $S_2 = 18 + 11 = 29$

FeedBack

 Bookmark

 Answer key/Solution

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

A newly inaugurated drama school has organised some plays to introduce its director's and choreographer's capabilities in the city. They wanted to do this with a fresh batch of talent, hence decided to select actors from four different schools -  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$  - and trained them to act in their five different plays namely Birbal, Shakespeare, Romeo-Juliet, LOC and Charlie Chaplin. The table shown below gives the number of actors required in a play from the four schools. Also, it is known that maximum of 20, 15, 7 and 12 could have been selected from the schools  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$  respectively.

	Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
$S_1$	8	7	6	4	3
$S_2$	4	5	2	9	7
$S_3$	2	6	3	7	5
$S_4$	3	4	5	8	6

Q.46

The difference between the maximum number of actors selected for exactly four plays and the minimum number of actors selected for exactly one play from school  $S_3$  is

Solution:

Correct Answer : 5

🔖 Bookmark

🔑 Answer key/Solution

Maximum number of actors selected for exactly four plays from school  $S_3$  is 3 who will act in four plays - Shakespeare, Romeo-Juliet, LOC and Charlie Chaplin. And 2 actors will participate in 4 plays - Birbal, Shakespeare, LOC and Charlie-Chaplin. So, maximum total 5 actors are there who can act in exactly 4 plays.

Birbal	Shakespeare	Romeo-Juliet	LOC	Charlie Chaplin
2	6	3	7	5
2	$6 - 3 = 3$	$3 - 3 = 0$	$7 - 3 = 4$	$5 - 3 = 2$
$2 - 2 = 0$	$3 - 2 = 1$	0	$4 - 2 = 2$	$2 - 2 = 0$
0	$1 - 1 = 0$	0	$2 - 1 = 1$	0

For finding minimum number of actors selected for only one play: Let all those actors who are selected in Birbal, Shakespeare, Romeo-Juliet, Charlie Chaplin are also selected for play LOC in such a way that all the actors selected for LOC are also selected in one of the other plays. Hence, minimum number of actors selected for exactly one play from school  $S_3$  can be 0.

So, the required difference is  $5 - 0 = 5$

Feedback

---

Directions for questions 47 to 50: Answer the questions on the basis of the information given below.

A chess tournament is taking place at the college club, and the players at all four of the tables are engaged in their fourth game against their prospective opponents. Tables are placed in a row adjacent to each other. The arrangement is such that the opponents are facing each other i.e. one is facing the North direction and the other is facing South. The players with white pieces are: Shahrukh, Sanjay, Saif and Shakti and all are facing the same direction. The players with black pieces are: Salman, Sunny, Sunil and Sohail, they all are facing the same direction. The current scores are 3 : 0, 2.5 : 0.5, 2 : 1, and 1.5 : 1.5 (Note: Tied games result in a score of 0.5 points for each player and each win awards 1 point whereas on losing, a player gets 0 point).

Further information:

- (i) The player who is using the white pieces at table 4 is Shakti and the current score at table 4 is not 2 : 1.
- (ii) Saif is playing at the table to the right of Sohail who has lost all of his games until now.
- (iii) Sunil who is not in the lead over his opponent, has not been in a tied game.
- (iv) Salman is in lead over his opponent.
- (v) Sanjay is playing against Sunny.

---

Q.47

What table is Sohail playing at, if he is facing the North direction, and what is the score at that table?

---

1 ☐ Table 1, 2.5 : 1.5

---

2 ☐ Table 2, 3 : 0

---

3 ☐ Table 1, 3 : 0

---

4 ☐ Cannot be determined



**Solution:**

**Correct Answer : 4**

**Your Answer : 4**

🔖 Bookmark

🔍 Answer key/Solution

Let players with black pieces are facing north and players with white pieces are facing south.

By (i), Shakti is at table 4 and his table score is either 3 : 0, 2.5 : 0.5, or 1.5 : 1.5.

By (iii), Sunil's table score is either 3 : 0 or 2 : 1.

By (iv), since Salman is leading, therefore, his score is either 2.5 : 0.5, 3 : 0 or 2 : 1.

Now by (ii) or (v), Saif is playing at the table to the right of Sohail, and has lost all his matches.

Therefore, his table score is definitely 3 : 0 and Sanjay is playing against Sunil.

Therefore, possible arrangements could be:

**Case 1:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Saif/Sunil	Sanjay/Sunny	Shakti/Salman
3:00	2:01	1.5 : 1.5	2.5 : 0.5

Case 2:

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Sanjay/Sunny	Saif/Sunil	Shakti/Salman
3:00	1.5 : 1.5	2:01	2.5 : 0.5

Case 3:

Table 1	Table 2	Table 3	Table 4
Sanjay/Sunny	Shahrukh / Sohail	Saif/Sunil	Shakti/Salman
1.5 : 1.5	3:00	2:01	2.5 : 0.5

Feedback

**Directions for questions 47 to 50: Answer the questions on the basis of the information given below.**

A chess tournament is taking place at the college club, and the players at all four of the tables are engaged in their fourth game against their prospective opponents. Tables are placed in a row adjacent to each other. The arrangement is such that the opponents are facing each other i.e. one is facing the North direction and the other is facing South. The players with white pieces are: Shahrukh, Sanjay, Saif and Shakti and all are facing the same direction. The players with black pieces are: Salman, Sunny, Sunil and Sohail, they all are facing the same direction. The current scores are 3 : 0, 2.5 : 0.5, 2 : 1, and 1.5 : 1.5 (Note: Tied games result in a score of 0.5 points for each player and each win awards 1 point whereas on losing, a player gets 0 point).

**Further information:**

(i) The player who is using the white pieces at table 4 is Shakti and the current score at table 4 is not 2 : 1.

(ii) Saif is playing at the table to the right of Sohail who has lost all of his games until now.

(iii) Sunil who is not in the lead over his opponent, has not been in a tied game.

(iv) Salman is in lead over his opponent.

(v) Sanjay is playing against Sunny.

**Q.48**

**Whose score is highest among all the players if Shahrukh is playing against Sunil?**

1 ☐ Salman

2 ☐ Saif

3 ☐ Shakti

4 ☐ Shahrukh

**Solution:**

**Correct Answer : 3**

Let players with black pieces are facing north and players with white pieces are facing south.  
By (i), Shakti is at table 4 and his table score is either 3 : 0, 2.5 : 0.5, or 1.5 : 1.5.  
By (iii), Sunil's table score is either 3 : 0 or 2 : 1.  
By (iv), since Salman is leading, therefore, his score is either 2.5 : 0.5, 3 : 0 or 2 : 1.  
Now by (ii) or (v), Saif is playing at the table to the right of Sohail, and has lost all his matches.  
Therefore, his table score is definitely 3 : 0 and Sanjay is playing against Sunil.  
Therefore, possible arrangements could be:

**Case 1:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Saif/Sunil	Sanjay/Sunny	Shakti/Salman
3:00	2:01	1.5 : 1.5	2.5 : 0.5

**Case 2:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Sanjay/Sunny	Saif/Sunil	Shakti/Salman
3:00	1.5 : 1.5	2:01	2.5 : 0.5

**Case 3:**

Table 1	Table 2	Table 3	Table 4
Sanjay/Sunny	Shahrukh / Sohail	Saif/Sunil	Shakti/Salman
1.5 : 1.5	3:00	2:01	2.5 : 0.5

Table 1	Table 2	Table 3	Table 4
Sunil/Shahrukh	Sunny/San Jay	Saif/Salman	Shakti/Sohail
2:01	1.5 : 1.5	2.5 : 0.5	3:00

Feedback

**Directions for questions 47 to 50: Answer the questions on the basis of the information given below.**

A chess tournament is taking place at the college club, and the players at all four of the tables are engaged in their fourth game against their prospective opponents. Tables are placed in a row adjacent to each other. The arrangement is such that the opponents are facing each other i.e. one is facing the North direction and the other is facing South. The players with white pieces are: Shahrukh, Sanjay, Saif and Shakti and all are facing the same direction. The players with black pieces are: Salman, Sunny, Sunil and Sohail, they all are facing the same direction. The current scores are 3 : 0, 2.5 : 0.5, 2 : 1, and 1.5 : 1.5 (Note: Tied games result in a score of 0.5 points for each player and each win awards 1 point whereas on losing, a player gets 0 point).

**Further information:**

- (i) The player who is using the white pieces at table 4 is Shakti and the current score at table 4 is not 2 : 1.
- (ii) Saif is playing at the table to the right of Sohail who has lost all of his games until now.
- (iii) Sunil who is not in the lead over his opponent, has not been in a tied game.
- (iv) Salman is in lead over his opponent.
- (v) Sanjay is playing against Sunny.

**Q.49**

**Which player has black pieces and the highest score?**

1 ☐ Salman

2 ☐ Sunny

3 ● Sunil

4 ● Sohail



**Solution:**

**Correct Answer : 1**

**Your Answer : 1**

Let players with black pieces are facing north and players with white pieces are facing south.

By (i), Shakti is at table 4 and his table score is either 3 : 0, 2.5 : 0.5, or 1.5 : 1.5.

By (iii), Sunil's table score is either 3 : 0 or 2 : 1.

By (iv), since Salman is leading, therefore, his score is either 2.5 : 0.5, 3 : 0 or 2 : 1.

Now by (ii) or (v), Saif is playing at the table to the right of Sohail, and has lost all his matches.

Therefore, his tables score is definitely 3 : 0 and Sanjay is playing against Sunil.

Therefore, possible arrangements could be:

**Case 1:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Saif/Sunil	Sanjay/Sunny	Shakti/Salman
3:00	2:01	1.5 : 1.5	2.5 : 0.5

**Case 2:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Sanjay/Sunny	Saif/Sunil	Shakti/Salman
3:00	1.5 : 1.5	2:01	2.5 : 0.5

**Case 3:**

Table 1	Table 2	Table 3	Table 4
Sanjay/Sunny	Shahrukh / Sohail	Saif/Sunil	Shakti/Salman
1.5 : 1.5	3:00	2:01	2.5 : 0.5

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for questions 47 to 50: Answer the questions on the basis of the information given below.**

A chess tournament is taking place at the college club, and the players at all four of the tables are engaged in their fourth game against their prospective opponents. Tables are placed in a row adjacent to each other. The arrangement is such that the opponents are facing each other i.e. one is facing the North direction and the other is facing South. The players with white pieces are: Shahrukh, Sanjay, Saif and Shakti and all are facing the same direction. The players with black pieces are: Salman, Sunny, Sunil and Sohail, they all are facing the same direction. The current scores are 3 : 0, 2.5 : 0.5, 2 : 1, and 1.5 : 1.5 (Note: Tied games result in a score of 0.5 points for each player and each win awards 1 point whereas on losing, a player gets 0 point).

**Further information:**

- (i) The player who is using the white pieces at table 4 is Shakti and the current score at table 4 is not 2 : 1.
- (ii) Saif is playing at the table to the right of Sohail who has lost all of his games until now.
- (iii) Sunil who is not in the lead over his opponent, has not been in a tied game.
- (iv) Salman is in lead over his opponent.
- (v) Sanjay is playing against Sunny.

**Q.50**

**Who is the winning player at Table 4?**

1 ☐ Salman

2 ☐ Shakti

3 ☐ Shahrukh

4 ☐ Either (1) and (2)

**Solution:**

**Correct Answer : 4**

Let players with black pieces are facing north and players with white pieces are facing south.

By (i), Shakti is at table 4 and his table score is either 3 : 0, 2.5 : 0.5, or 1.5 : 1.5.

By (iii), Sunil's table score is either 3 : 0 or 2 : 1.

By (iv), since Salman is leading, therefore, his score is either 2.5 : 0.5, 3 : 0 or 2 : 1.

Now by (ii) or (v), Saif is playing at the table to the right of Sohail, and has lost all his matches.

Therefore, his table score is definitely 3 : 0 and Sanjay is playing against Sunil.

Therefore, possible arrangements could be:

**Case 1:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Saif/Sunil	Sanjay/Sunny	Shakti/Salman
3:00	2:01	1.5 : 1.5	2.5 : 0.5

**Case 2:**

Table 1	Table 2	Table 3	Table 4
Shahrukh / Sohail	Sanjay/Sunny	Saif/Sunil	Shakti/Salman
3:00	1.5 : 1.5	2:01	2.5 : 0.5

**Case 3:**

Table 1	Table 2	Table 3	Table 4
Sanjay/Sunny	Shahrukh / Sohail	Saif/Sunil	Shakti/Salman
1.5 : 1.5	3:00	2:01	2.5 : 0.5

FeedBack

 **Bookmark**

 **Answer key/Solution**



Directions for question 51 to 54: Answer the questions on the basis of the information given below.

Exactly 100 employees work in an office. A ten days activity was organised in which all employees played one of the games - Tennis, Basketball, Volleyball and Badminton in their break hour. On day one, 20, 30, 25 and 25 employees played Tennis, Basketball, Volleyball and Badminton respectively.

The following table provides the information about the shifting of employees from one sport to other from day 2 onwards.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Tennis to basketball	2	3	4	4	1	8	1	6	4
Tennis to Volleyball	1	5	6	6	5	4	4	4	2
Tennis to Badminton	3	0	3	3	6	5	5	3	3
Basketball to Tennis	4	6	2	1	2	2	2	8	4
Basketball to Volleyball	5	2	7	2	3	3	5	2	1
Basketball to Badminton	0	3	8	3	4	6	3	5	2
Volleyball to Basketball	5	4	1	4	2	1	6	1	3
Volleyball to Tennis	6	5	1	2	5	2	1	6	8
Volleyball to Badminton	2	3	2	3	7	4	4	3	6
Badminton to Tennis	3	1	3	4	3	8	2	5	3
Badminton to Volleyball	4	2	1	6	1	3	9	4	2
Badminton to basketball	2	3	5	7	5	5	3	2	1

**Q.51**

**How many employees played Volleyball on 9th day?**

**Solution:**

**Correct Answer : 39**

 **Bookmark**

 **Answer key/Solution**

On day 1, 25 people played Volleyball and on day two 5, 6 and 2 people shifted from volleyball to other sports while 1, 5 and 4 people shifted from other sports to volleyball. So total no of people who played Volleyball on day 2 is  $(25-5-6-2+1+5+4) = 22$  people. This way we can calculate it for other days also.

	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10
Tennis	20	27	31	24	18	16	11	6	12	18
Volleyball	25	22	19	29	34	29	32	39	39	27
Basketball	30	30	29	22	31	30	33	33	27	28
Badminton	25	21	21	25	17	25	24	22	22	27

39 people played Volleyball on 9<sup>th</sup> day.

**FeedBack**

Directions for question 51 to 54: Answer the questions on the basis of the information given below.

Exactly 100 employees work in an office. A ten days activity was organised in which all employees played one of the games - Tennis, Basketball, Volleyball and Badminton in their break hour. On day one, 20, 30, 25 and 25 employees played Tennis, Basketball, Volleyball and Badminton respectively.

The following table provides the information about the shifting of employees from one sport to other from day 2 onwards.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Tennis to basketball	2	3	4	4	1	8	1	6	4
Tennis to Volleyball	1	5	6	6	5	4	4	4	2
Tennis to Badminton	3	0	3	3	6	5	5	3	3
Basketball to Tennis	4	6	2	1	2	2	2	8	4
Basketball to Volleyball	5	2	7	2	3	3	5	2	1
Basketball to Badminton	0	3	8	3	4	6	3	5	2
Volleyball to Basketball	5	4	1	4	2	1	6	1	3
Volleyball to Tennis	6	5	1	2	5	2	1	6	8
Volleyball to Badminton	2	3	2	3	7	4	4	3	6
Badminton to Tennis	3	1	3	4	3	8	2	5	3
Badminton to Volleyball	4	2	1	6	1	3	9	4	2
Badminton to basketball	2	3	5	7	5	5	3	2	1

Q.52

Find the difference between the maximum number of employees playing any sport and the minimum number of employees playing any sport on the given 10 days.

1 ☐ 33

2 ☐ 18

3 ☐ 25

4 ☐ 29

**Solution:**

**Correct Answer : 1**

🔖 **Bookmark**

🔍 **Answer key/Solution**

On day 1, 25 people played Volleyball and on day two 5, 6 and 2 people shifted from volleyball to other sports while 1, 5 and 4 people shifted from other sports to volleyball. So total no of people who played Volleyball on day 2 is  $(25-5-6-2+1+5+4) = 22$  people. This way we can calculate it for other days also.

	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10
Tennis	20	27	31	24	18	16	11	6	12	18
Volleyball	25	22	19	29	34	29	32	39	39	27
Basketball	30	30	29	22	31	30	33	33	27	28
Badminton	25	21	21	25	17	25	24	22	22	27

$$39 - 6 = 33$$

FeedBack

**Directions for question 51 to 54: Answer the questions on the basis of the information given below.**

Exactly 100 employees work in an office. A ten days activity was organised in which all employees played one of the games - Tennis, Basketball, Volleyball and Badminton in their break hour. On day one, 20, 30, 25 and 25 employees played Tennis, Basketball, Volleyball and Badminton respectively.

The following table provides the information about the shifting of employees from one sport to other from day 2 onwards.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Tennis to basketball	2	3	4	4	1	8	1	6	4
Tennis to Volleyball	1	5	6	6	5	4	4	4	2
Tennis to Badminton	3	0	3	3	6	5	5	3	3
Basketball to Tennis	4	6	2	1	2	2	2	8	4
Basketball to Volleyball	5	2	7	2	3	3	5	2	1
Basketball to Badminton	0	3	8	3	4	6	3	5	2
Volleyball to Basketball	5	4	1	4	2	1	6	1	3
Volleyball to Tennis	6	5	1	2	5	2	1	6	8
Volleyball to Badminton	2	3	2	3	7	4	4	3	6
Badminton to Tennis	3	1	3	4	3	8	2	5	3
Badminton to Volleyball	4	2	1	6	1	3	9	4	2
Badminton to basketball	2	3	5	7	5	5	3	2	1

**Q.53**

**For how many days did at least 20 employees play each of the four sports?**

**Solution:**

**Correct Answer : 3**

🔖 **Bookmark**

🔍 **Answer key/Solution**

On day 1, 25 people played Volleyball and on day two 5, 6 and 2 people shifted from volleyball to other sports while 1, 5 and 4 people shifted from other sports to volleyball. So total no of people who played Volleyball on day 2 is  $(25-5-6-2+1+5+4) = 22$  people. This way we can calculate it for other days also.

	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10
Tennis	20	27	31	24	18	16	11	6	12	18
Volleyball	25	22	19	29	34	29	32	39	39	27
Basketball	30	30	29	22	31	30	33	33	27	28
Badminton	25	21	21	25	17	25	24	22	22	27

For 3 days each sports was played by at least 20 people.

Feedback

**Directions for question 51 to 54: Answer the questions on the basis of the information given below.**

Exactly 100 employees work in an office. A ten days activity was organised in which all employees played one of the games - Tennis, Basketball, Volleyball and Badminton in their break hour. On day one, 20, 30, 25 and 25 employees played Tennis, Basketball, Volleyball and Badminton respectively.

The following table provides the information about the shifting of employees from one sport to other from day 2 onwards.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Tennis to basketball	2	3	4	4	1	8	1	6	4
Tennis to Volleyball	1	5	6	6	5	4	4	4	2
Tennis to Badminton	3	0	3	3	6	5	5	3	3
Basketball to Tennis	4	6	2	1	2	2	2	8	4
Basketball to Volleyball	5	2	7	2	3	3	5	2	1
Basketball to Badminton	0	3	8	3	4	6	3	5	2
Volleyball to Basketball	5	4	1	4	2	1	6	1	3
Volleyball to Tennis	6	5	1	2	5	2	1	6	8
Volleyball to Badminton	2	3	2	3	7	4	4	3	6
Badminton to Tennis	3	1	3	4	3	8	2	5	3
Badminton to Volleyball	4	2	1	6	1	3	9	4	2
Badminton to basketball	2	3	5	7	5	5	3	2	1

**Q.54**

**Which of the following sports was played by the maximum number of employees in the ten days?**

1 ☐ Tennis

2 ☐ Volleyball

3 ☐ Basketball

4 ☐ Badminton

**Solution:**

**Correct Answer : 2**

 **Bookmark**

 **Answer key/Solution**

On day 1, 25 people played Volleyball and on day two 5, 6 and 2 people shifted from volleyball to other sports while 1, 5 and 4 people shifted from other sports to volleyball. So total no of people who played Volleyball on day 2 is  $(25-5-6-2+1+5+4) = 22$  people. This way we can calculate it for other days also.

	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8	Day9	Day10
Tennis	20	27	31	24	18	16	11	6	12	18
Volleyball	25	22	19	29	34	29	32	39	39	27
Basketball	30	30	29	22	31	30	33	33	27	28
Badminton	25	21	21	25	17	25	24	22	22	27

As the sum of values for all the 10 days is maximum for Volleyball. So it's for Volleyball.

Feedback

**Directions for question 55 to 58: Answer the questions on the basis of the information given below.**

Mr. Sharma is hosting a house party wherein he invited his friends and relatives. Mr. Sharma's wife suggested him to order food out of the six different food types – Pizza, Pasta, Cold drink, Burger, noodles, and thali - for the guests. As per the suggestion of his wife, he ordered the food keeping the following points in mind:

1. He can order multiple numbers of a food type.
2. The order must contain at least 6 food items of at least 3 different types.
3. At most, 2 thali can be ordered.
4. At most, 3 burgers can be ordered.
5. There can be at most one of each of the type - Pizza, Pasta, Cold drink, Noodles - in an order.
6. If Mr. Sharma adds pizza in his order, then he has to order cold drink also.
7. If he orders pasta as one of the food types, then he cannot order noodles.

**Q.55**

**What is the maximum numbers of food items that can be ordered?**

×

**Solution:**

**Correct Answer : 8**

**Your Answer : 6**

**Maximum numbers of food items that can be ordered:-**

**2 thali + 3 burger + 1 pizza + 1 cold drink + 1 pasta / 1 noodles = 8 items.**

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for question 55 to 58: Answer the questions on the basis of the information given below.**

**Mr. Sharma is hosting a house party wherein he invited his friends and relatives. Mr. Sharma's wife suggested him to order food out of the six different food types – Pizza, Pasta, Cold drink, Burger, noodles, and thali - for the guests. As per the suggestion of his wife, he ordered the food keeping the following points in mind:**

- 1. He can order multiple numbers of a food type.**
- 2. The order must contain at least 6 food items of at least 3 different types.**
- 3. At most, 2 thali can be ordered.**
- 4. At most, 3 burgers can be ordered.**
- 5. There can be at most one of each of the type - Pizza, Pasta, Cold drink, Noodles - in an order.**
- 6. If Mr. Sharma adds pizza in his order, then he has to order cold drink also.**
- 7. If he orders pasta as one of the food types, then he cannot order noodles.**

**Q.56**

**If Mr. Sharma has to order cold drink and pasta necessarily, then any of the following pairs of food types would complete the order, EXCEPT**

1 ☐ Thali and burger

2 ☐ Pizza and thali

3 ☐ Pizza and burger

4 ☐ All are possible

×

**Solution:**

**Correct Answer : 2**

**Your Answer : 4**

**In option 1,**

**1 cold drink + 1 pasta + 2 thali + 3 burger + 7 items.**

**This can complete the order.**

**In option 2,**

**1 cold drink + 1 pasta + 1 pizza + 2 thali, therefore there could be maximum 5 items.**

**This will not complete the order.**

**In option 3,**

**1 cold drink + 1 pasta + 1 pizza + 3 burger = 6 items.**

**This can complete the order.**

**So, only option 2 cannot complete the order 2.**

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Directions for question 55 to 58: Answer the questions on the basis of the information given below.**

**Mr. Sharma is hosting a house party wherein he invited his friends and relatives. Mr. Sharma's wife suggested him to order food out of the six different food types – Pizza, Pasta, Cold drink, Burger, noodles, and thali - for the guests. As per the suggestion of his wife, he ordered the food keeping the following points in mind:**

- 1. He can order multiple numbers of a food type.**
- 2. The order must contain at least 6 food items of at least 3 different types.**
- 3. At most, 2 thali can be ordered.**
- 4. At most, 3 burgers can be ordered.**
- 5. There can be at most one of each of the type - Pizza, Pasta, Cold drink, Noodles - in an order.**
- 6. If Mr. Sharma adds pizza in his order, then he has to order cold drink also.**
- 7. If he orders pasta as one of the food types, then he cannot order noodles.**

**Q.57**

**If it is necessary to order pasta when cold drink is ordered, then which of the following must be true?**

- 1 ☐ **Order cannot contain more than 6 items**
- 2 ☐ **Pizza is definitely ordered if pasta is ordered.**
- 3 ☐ **No order will contain less than 7 items.**
- 4 ☐ **Noodles will not be ordered if pizza is ordered.**

×

**Solution:**

**Correct Answer : 4**

**Your Answer : 1**

 **Bookmark**

 **Answer key/Solution**

(a) order can contain more than 6 items:-

2 thali + 3 burger + 1 pizza + 1 CD + 1 pasta = 8 items

(b) It is false, because, pasta is definitely ordered if pizza is ordered since.

Cold drink is definitely ordered if pizza is ordered.

(c) It is false. An order can contain less than 7 items. i.e.

2 thali + 3 burger + 1 Noodles = 6 items.

(d) It is definitely true if pizza is ordered, then pasta is definitely ordered and noodles are not ordered if pizza is ordered.

FeedBack

**Directions for question 55 to 58: Answer the questions on the basis of the information given below.**

Mr. Sharma is hosting a house party wherein he invited his friends and relatives. Mr. Sharma's wife suggested him to order food out of the six different food types – Pizza, Pasta, Cold drink, Burger, noodles, and thali - for the guests. As per the suggestion of his wife, he ordered the food keeping the following points in mind:

1. He can order multiple numbers of a food type.
2. The order must contain at least 6 food items of at least 3 different types.
3. At most, 2 thali can be ordered.
4. At most, 3 burgers can be ordered.
5. There can be at most one of each of the type - Pizza, Pasta, Cold drink, Noodles - in an order.
6. If Mr. Sharma adds pizza in his order, then he has to order cold drink also.
7. If he orders pasta as one of the food types, then he cannot order noodles.

**Q.58**

Had the noodles were also possible to be ordered with pasta, then how many different combinations of food items could have been ordered by Mr. Sharma when number of items is at most 7?

1 ☐ 29

2 ☐ 24

3 ☐ 36

4 ☐ None of these.



**Solution:**

**Correct Answer : 3**

 **Bookmark**

 **Answer key/Solution**

Since number of items can be at most 7, so there are two possibilities: either Mr. Sharma ordered 6 items or 7 items. Since two complete any of the two possibilities thali and burger are necessary to order.

**Case 1:**

**When he ordered no thali.**

(i) When number of items ordered is 6.

If all Pizza, Pasta, Cold drink and noodles are ordered, then two burgers must be ordered.

If any three of them ordered, then 3 burgers must be ordered. But any three can be ordered in 3 ways: (Pizza, pasta, cold drink), (pizza, cold drink, noodles), (pasta, cold drink, noodles). So, total three ways.

If any two of them is ordered, then 4 burger must be ordered which is not possible. Also, if it was possible, then there are 4 ways to order any two out of the four as: (Pizza, cold drink), (cold drink, pasta), (cold drink, noodles), (noodles, pasta).

(ii) When number of items ordered is 7.

If all 4 ordered, then 3 burgers must be ordered.

So, total  $1 + 3 + 1 = 5$  ways.

**Case 2:**

**When he ordered 1 thali.**

(i) When number of items ordered is 6.

If all Pizza, Pasta, Cold drink and noodles are ordered, then one burgers must be ordered and 1 thali.

If any three of them ordered, then 2 burgers must be ordered. So, total three ways.

If any two of them is ordered, then 3 burger must be ordered. So, total 4 ways.

(ii) When number of items ordered is 7.

If all 4 ordered, then 2 burgers must be ordered.

If any three ordered, 3 burgers and 1 thali must be ordered. So, total 3 ways.

So, total  $1 + 3 + 4 + 1 + 3 = 12$  ways.

**Case 3:**

**When he ordered 2 thali.**

(i) When number of items ordered is 6.

If all Pizza, Pasta, Cold drink and noodles are ordered, then no burger can be ordered.

If any three of them ordered, then 1 burgers must be ordered. So, total three ways.

If any two of them is ordered, then 2 burger must be ordered. So, total 4 ways.

If any one of them is ordered, then 3 burgers must be ordered. And it is possible in 3 ways, as pizza can't be ordered alone.

(ii) When number of items ordered is 7.

If all 4 ordered, then 1 burgers must be ordered.

If any three ordered, 2 burgers and 2 thali must be ordered. So, total 3 ways.

If any two ordered, 3 burgers must be ordered.

So, total  $1 + 3 + 4 + 3 + 1 + 3 + 4 = 19$  ways.

So, total possibilities =  $5 + 12 + 19 = 36$  ways.

FeedBack

**Directions for question 59 to 62: Answer the questions on the basis of the information given below.**

**Anuj surveyed Seven food ordering apps in New Delhi city measuring the time taken by 6 different restaurants for food delivery at Anuj's Home. Anuj also rated them on a rating of 1 to 5 on the basis of average food delivery time. Table 1 gives the rating according to the average delivery time associated with each delivery time. Higher the rating the better it is. Some cells in table-2 are left blank intentionally.**

**Table -1 Rating Chart**

Average delivery Time (In minutes)	Rating
1-10	5
10-15	4
15-25	3
25-40	2
>40	1

**Table-2 Delivery time (In minutes)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	10	27		18	12	15
Foodpanda	15	22	12	22		18
Uber Eats		25	12	27	35	8
Fassos	53	23	13		3	20
Swiggy	42	18	11	9	22	
FreshMenu	18	27	9		7	45
BOX8	35		17	5	36	10

**Table-3 Delivery Charges (in Rs.)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	30	18	10	8	13	16
Foodpanda	12	16	10	15	20	18
Uber Eats	18	20	25	16	26	19
Fassos	10	18	27	17	27	15
Swiggy	13	18	32	19	36	14
FreshMenu	25	37	24	10	35	16
BOX8	36	45	16	18	15	23

**Q.59**

If the Average food Delivery time for each food delivery app is not more than 22 minutes then find the minimum number of combinations of food app and restaurant from which Anuj can order food with delivery time less than the given average delivery time and delivery charges less than Rs.20.

1 ☐ 72 ☐ 123 ☐ 134 ☐ 15

**Solution:**

**Correct Answer : 3**

🔖 **Bookmark**

🔍 **Answer key/Solution**

If the Average food Delivery time for each food delivery app is not more than 22 minutes then, we need to find the minimum combinations, for doing so let the average food delivery time of the food apps be the maximum possible that is, 22, and now find the value of the missing cells using this information.

Missing value of zomato (restaurant 3):  $\frac{(10 + 27 + x + 18 + 12 + 15)}{6} = 22$ , then  $x = 50$

Solving like this for every app, we get, foodpanda (restaurant 5)= 43, uber eats (restaurant 1) = 25, fassos (restaurant 4) = 20, swiggy (restaurant 6) = 30, Freshmenu(restaurant 4)= 26, Box 8 (Restaurant 2) = 29.

Therefore we get total of 13 combinations, 12 are circled in the table given below and 13th combination is fassos(restaurant 4).

**Table-2 Delivery time (In minutes)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	10	27		(18)	(12)	(15)
Foodpanda	(15)	22	(12)	22		(18)
Uber Eats		25	12	27	35	(8)
Fassos	53	23	13		3	(20)
Swiggy	42	(18)	11	(9)	22	
FreshMenu	18	27	9		7	45
BOX8	35		(17)	(5)	36	10

FeedBack

**Directions for question 59 to 62: Answer the questions on the basis of the information given below.**

Anuj surveyed Seven food ordering apps in New Delhi city measuring the time taken by 6 different restaurants for food delivery at Anuj's Home. Anuj also rated them on a rating of 1 to 5 on the basis of average food delivery time. Table 1 gives the rating according to the average delivery time associated with each delivery time. Higher the rating the better it is. Some cells in table-2 are left blank intentionally.

**Table -1 Rating Chart**

Average delivery Time (In minutes)	Rating
1-10	5
10-15	4
15-25	3
25-40	2
>40	1

**Table-2 Delivery time (In minutes)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	10	27		18	12	15
Foodpanda	15	22	12	22		18
Uber Eats		25	12	27	35	8
Fassos	53	23	13		3	20
Swiggy	42	18	11	9	22	
FreshMenu	18	27	9		7	45
BOX8	35		17	5	36	10

**Table-3 Delivery Charges (in Rs.)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	30	18	10	8	13	16
Foodpanda	12	16	10	15	20	18
Uber Eats	18	20	25	16	26	19
Fassos	10	18	27	17	27	15
Swiggy	13	18	32	19	36	14
FreshMenu	25	37	24	10	35	16
BOX8	36	45	16	18	15	23

**Q.60**

If it is known that the delivery time provided by the food apps is not more than 60 minutes and not less than 2 minutes, then find the worst rating that Swiggy and Foodpanda can obtain.

1 ☐ 5,32 ☐ 2,33 ☐ 3,24 ☐ 4,2

**Solution:**

**Correct Answer : 2**

🔖 Bookmark

🔍 Answer key/Solution

To obtain worst rating for swiggy and foodpanda, let us assign the maximum delivery time to the missing cell in the row of foodpanda and swiggy

For swiggy average delivery time of all the restaurants:-

$$\frac{42 + 18 + 11 + 9 + 22 + 60}{6} = \frac{162}{6} = 27.$$

For foodpanda average delivery time of all the restaurants:-

$$\frac{15 + 22 + 12 + 22 + 60 + 18}{6} = 24.83$$

Now, if average delivery time is 27, the rating will be '2' and if average delivery time is 24.83 then rating is '3'.

FeedBack

**Directions for question 59 to 62: Answer the questions on the basis of the information given below.**

Anuj surveyed Seven food ordering apps in New Delhi city measuring the time taken by 6 different restaurants for food delivery at Anuj's Home. Anuj also rated them on a rating of 1 to 5 on the basis of average food delivery time. Table 1 gives the rating according to the average delivery time associated with each delivery time. Higher the rating the better it is. Some cells in table-2 are left blank intentionally.

**Table -1 Rating Chart**

Average delivery Time (In minutes)	Rating
1-10	5
10-15	4
15-25	3
25-40	2
>40	1

**Table-2 Delivery time (In minutes)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	10	27		18	12	15
Foodpanda	15	22	12	22		18
Uber Eats		25	12	27	35	8
Fassos	53	23	13		3	20
Swiggy	42	18	11	9	22	
FreshMenu	18	27	9		7	45
BOX8	35		17	5	36	10

**Table-3 Delivery Charges (in Rs.)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	30	18	10	8	13	16
Foodpanda	12	16	10	15	20	18
Uber Eats	18	20	25	16	26	19
Fassos	10	18	27	17	27	15
Swiggy	13	18	32	19	36	14
FreshMenu	25	37	24	10	35	16
BOX8	36	45	16	18	15	23

**Q.61**

If Food ordering apps started waiving off delivery charges over an order of Rs. X and a cash back of 10% then find the value of X for BOX8 from Restaurant 2 so that it should not occur any losses. BOX8 gets 20% commission from restaurant for delivering food.

1 ☐ 4502 ☐ 4203 ☐ 4004 ☐ 350

**Solution:**

**Correct Answer : 1**

🔖 Bookmark

🔍 Answer key/Solution

Let the order be of Rs.  $x$

Cashback :  $10\%x$

Commission:-  $20\%x$

It is a situation of break even, where a firm makes no profit and no loss i.e., Revenue earned by the company gets nullified by the cost that it incurs.

i.e., profit = cost

$$20\%x = 10\%x + 45$$

$$x \left[ \frac{20}{100} - \frac{10}{100} \right] = 45$$

$$x \left[ \frac{1}{10} \right] = 45$$

$$x = \text{Rs. } 450.$$

Feedback

**Directions for question 59 to 62: Answer the questions on the basis of the information given below.**

Anuj surveyed Seven food ordering apps in New Delhi city measuring the time taken by 6 different restaurants for food delivery at Anuj's Home. Anuj also rated them on a rating of 1 to 5 on the basis of average food delivery time. Table 1 gives the rating according to the average delivery time associated with each delivery time. Higher the rating the better it is. Some cells in table-2 are left blank intentionally.

**Table -1 Rating Chart**

Average delivery Time (In minutes)	Rating
1-10	5
10-15	4
15-25	3
25-40	2
>40	1

**Table-2 Delivery time (In minutes)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	10	27		18	12	15
Foodpanda	15	22	12	22		18
Uber Eats		25	12	27	35	8
Fassos	53	23	13		3	20
Swiggy	42	18	11	9	22	
FreshMenu	18	27	9		7	45
BOX8	35		17	5	36	10

**Table-3 Delivery Charges (in Rs.)**

	Restaurant1	Restaurant2	Restaurant3	Restaurant4	Restaurant5	Restaurant6
Zomato	30	18	10	8	13	16
Foodpanda	12	16	10	15	20	18
Uber Eats	18	20	25	16	26	19
Fassos	10	18	27	17	27	15
Swiggy	13	18	32	19	36	14
FreshMenu	25	37	24	10	35	16
BOX8	36	45	16	18	15	23

**Q.62**

For how many of the restaurants, the average delivery charges is less than the average delivery charges of Freshmenu?

1 ☐ 32 ☐ 43 ☐ 54 ☐ 6



**Solution:**

**Correct Answer : 2**

🔖 Bookmark

🔍 Answer key/Solution

Average delivery charges of freshmenu:- 24.5

Average delivery charges of Rs.

Restaurant1: 20.57

Restaurant2: 24.57

Restaurant3: 20.57

Restaurant4: 14.714

Restaurant5: 24.57

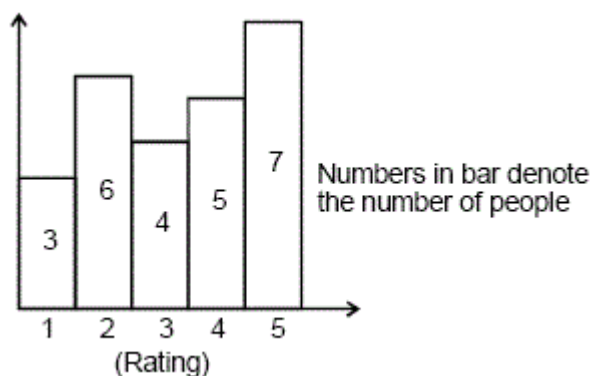
Restaurant6: 17.28

4 Restaurants average delivery charges are less than the average delivery charges of freshmenu.

Feedback

**Directions for question 63 to 66: Answer the questions on the basis of the information given below.**

Five MBA colleges- P, Q, R, S, and T – were rated from 1 to 5 in five different attributes – Placement (PL), Hostel Facilities (HF), Food (FD), Personality Development (PD), and Ethical Awareness (EA), where 1 being the lowest rating and 5 being the highest. According to the overall rating of each college i.e the sum of the ratings got by a college in all five attributes, the college which was rated highest was tagged as the “most aspiring” college and the one which was rated least was tagged as the “under-developed”. The following bar graph shows the details about the number of people for each given ratings.



**Further details known to us are:**

1. All colleges got a rating of 5 in at most three attributes.
2. No college got an overall rating of less than 12.
3. Each of the five colleges got the rating of both 2 and 4 at least once in some of the attribute(s).

**Q.63**

If according to the overall rating, the five colleges are in the order  $P > Q > R > S > T$ , where T has the minimum possible overall rating and P has the maximum possible overall rating, then what is the overall rating for R?

1 ☐ 15

2 ☐ 17

3 ☐ 14

4 ● Cannot be determined

**Solution:**

**Correct Answer : 2**

🔖 Bookmark

🔑 Answer key/Solution

Given:- T has the minimum possible rating and P has the maximum possible overall rating and each of the five colleges got the rating of both 2 and 4 atleast once.

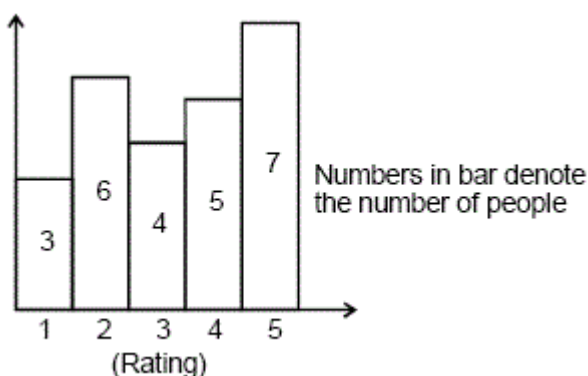
	P	Q	R	S	T
	2	2	2	2	2
	4	4	4	4	4
	5	5	5	5	1
	5	5	3	1	2
	5	3	3	1	3
Total	21	19	17	13	12

This is the only possible combination where in P, Q, R, S and T have difference ratings and in a descending order respectively.

Feedback

**Directions for question 63 to 66: Answer the questions on the basis of the information given below.**

Five MBA colleges- P, Q, R, S, and T – were rated from 1 to 5 in five different attributes – Placement (PL), Hostel Facilities (HF), Food (FD), Personality Development (PD), and Ethical Awareness (EA), where 1 being the lowest rating and 5 being the highest. According to the overall rating of each college i.e the sum of the ratings got by a college in all five attributes, the college which was rated highest was tagged as the “most aspiring” college and the one which was rated least was tagged as the “under-developed”. The following bar graph shows the details about the number of people for each given ratings.



**Further details known to us are:**

1. All colleges got a rating of 5 in at most three attributes.
2. No college got an overall rating of less than 12.
3. Each of the five colleges got the rating of both 2 and 4 at least once in some of the attribute(s).

Q.64

If only two colleges P and S got the overall rating as 17 and despite getting a rating of 1 in one of the attributes, none of them were tagged as under developed, then what can be the smallest possible overall rating of the college tagged as the “most aspiring”?

1 ☐ 17

2 ☐ 19


3 ☐ 18

4 ☐ 20

**Solution:**

**Correct Answer : 3**

 **Bookmark**

 **Answer key/Solution**

Since P and S both got the rating 17 and also got 1 as a rating in one of the attributes, they were not tagged as under developed therefore, some college definitely got the rating was than 17 and except P and S every college got a different rating.

P	Q	R	S	T
2	2	2	2	2
4	4	4	4	4
1			1	
5			5	
5			5	
17			17	

You will observe that for no combination, 17 will be the smallest possible overall rating. Let's try for 18:-

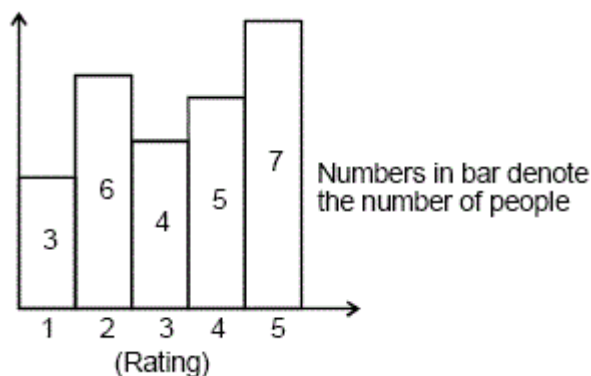
P	Q	R	S	T
2	2	2	2	2
4	4	4	4	4
1	5	5	1	3
5	5	3	5	3
5	2	1	5	3
17	18	15	17	15

So smallest possible overall rating of the college tagged as the most aspiring is 18.

**FeedBack**

Directions for question 63 to 66: Answer the questions on the basis of the information given below.

Five MBA colleges- P, Q, R, S, and T – were rated from 1 to 5 in five different attributes – Placement (PL), Hostel Facilities (HF), Food (FD), Personality Development (PD), and Ethical Awareness (EA), where 1 being the lowest rating and 5 being the highest. According to the overall rating of each college i.e the sum of the ratings got by a college in all five attributes, the college which was rated highest was tagged as the “most aspiring” college and the one which was rated least was tagged as the “under-developed”. The following bar graph shows the details about the number of people for each given ratings.



Further details known to us are:

1. All colleges got a rating of 5 in at most three attributes.
2. No college got an overall rating of less than 12.
3. Each of the five colleges got the rating of both 2 and 4 at least once in some of the attribute(s).

Q.65

Which of the following cannot be an overall rating of the college tagged as the “under-developed”?

1 ☐ 12

2 ☐ 13

3 ☐ 15

4 ☐ All are possible

**Solution:**

**Correct Answer : 4**

🔖 **Bookmark**

🔑 **Answer key/Solution**

In the previous parts, we have noticed that 12 and 15 can be an overall rating of the college tagged as the “under-developed”

Let's check for 13:-

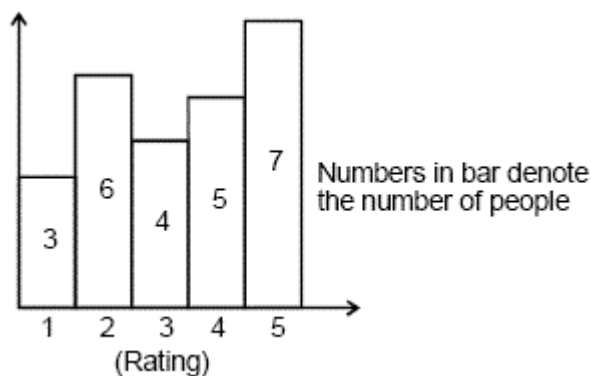
	P	Q	R	S	T
	2	2	2	2	2
	4	4	4	4	4
	5	5	5	3	5
	5	5	3	3	1
	5	3	1	2	1
<b>Total</b>	<b>21</b>	<b>19</b>	<b>15</b>	<b>14</b>	<b>13</b>

∴ All are possible.

Feedback

**Directions for question 63 to 66: Answer the questions on the basis of the information given below.**

Five MBA colleges- P, Q, R, S, and T – were rated from 1 to 5 in five different attributes – Placement (PL), Hostel Facilities (HF), Food (FD), Personality Development (PD), and Ethical Awareness (EA), where 1 being the lowest rating and 5 being the highest. According to the overall rating of each college i.e the sum of the ratings got by a college in all five attributes, the college which was rated highest was tagged as the “most aspiring” college and the one which was rated least was tagged as the “under-developed”. The following bar graph shows the details about the number of people for each given ratings.



**Further details known to us are:**

1. All colleges got a rating of 5 in at most three attributes.
2. No college got an overall rating of less than 12.
3. Each of the five colleges got the rating of both 2 and 4 at least once in some of the attribute(s).

**Q.66**

If three of the five colleges got their overall rating as distinct prime numbers, then what is the sum of the ratings of the colleges tagged as the “most aspiring” and the “under-developed”?

2 ☐ 32

3 ☐ 36

4 ☐ 30

**Solution:**

**Correct Answer : 1**

Since three of the five colleges got their overall rating as distinct prime numbers then it must be the case mentioned in answer (63), there minimum rating was 12 and maximum rating was 21.

The sum is:-  $12 + 21 = 33$ .

FeedBack

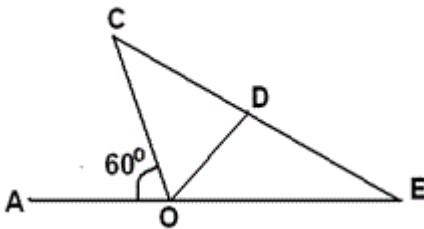
🔖 Bookmark

🔍 Answer key/Solution

## Sec 3

**Q.67**

In the given figure angle  $AOC = 60^\circ$  and the ratio between angle  $COD$  and angle  $DOE$  is  $2 : 1$ , also  $DO = DE$ . Find the angle  $OCD$ .



1 ☐  $35^\circ$

2 ☐  $20^\circ$

3 ☐  $50^\circ$

4 ☐  $120^\circ$

**Solution:**

**Correct Answer : 2**

🔖 Bookmark

🔍 Answer key/Solution

As angle COD : angle DOE = 2 : 1 and angle AOC + angle COD + angle DOE forms a linear pair.

So,  $60^\circ + 2x + x = 180^\circ$ .

Therefore,  $x = 40^\circ$

Hence, angle DOE =  $40^\circ$  = angle DEO

In triangle DOE, angle ODE =  $100^\circ$  = angle COD + angle OCD

This implies, angle OCD =  $100^\circ - 80^\circ = 20^\circ$

FeedBack

**Q.68**

Ravi's present age is 50% of Charu's present age. If a few years ago Ravi's age was 33.33% of the Charu's age, then find out the percentage change in Ravi's age over the time.

✖

**Solution:**

**Correct Answer : 100**

**Your Answer : 16.66**

Suppose Ravi's present age is  $x$

$\therefore$  Charu's present age =  $2x$

Suppose 'y' years ago

$(2x - y) \times 33.33\% = (x - y)$

$$\Rightarrow (2x - y) \times \frac{1}{3} = x - y$$

$$\Rightarrow 2x - y = 3x - 3y$$

$$\Rightarrow x = 2y \Rightarrow y = \frac{x}{2}$$

$\therefore$  'y' years ago, Ravi's age was  $\left(x - \frac{x}{2}\right) = \frac{x}{2}$

Hence, percentage change in Ravi's present age =  $\frac{\frac{x}{2}}{\frac{x}{2}} \times 100 = 100\%$

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Q.69**

A person can complete a work in 257 days. First day, that person worked alone. Second day another person joined him who can complete the whole work alone in 128.5 days. Third day one more person joined them, whose efficiency is double as compared to the second person, and so on. Find the number of days required to complete the work.

1 ☐  $7\frac{10}{127}$

2 ☐  $8\frac{10}{128}$

3 ☐  $7\frac{10}{255}$

4 ☐ 8

**Solution:**

**Correct Answer : 3**

Suppose work to be done be 257 units

$$\therefore \text{Efficiency of 1st person} = \frac{257}{257} = 1 \text{ unit/day}$$

$$\text{Efficiency of IInd person} = \frac{257}{128.5} = 2 \text{ units/day}$$

Efficiency of IIIrd person = 4 units/day

Efficiency of IVth person = 8 units/day

and so on.

$\therefore$  Adding work done on consecutive days = 1 + 3 + 7 + 15 + 31 + 63 + 127 + 255

But in first 7 days, 247 units of work is already done.

Hence, remaining 10 units will be completed in  $\frac{10}{255}$  days.

Total time taken is  $7\frac{10}{255}$  days.

Feedback

 **Bookmark**

 **Answer key/Solution**

**Q.70**

How many 4-digit perfect squares can be formed using the digits 1, 2, 5 and 9, without repetition?

**Solution:**

**Correct Answer : 0**

 **Bookmark**

 **Answer key/Solution**

The digit sum of a perfect square is always 1, 4, 7 or 9. Sum of the digits of the given numbers (1, 2, 5, 9) is 8. So, there will be no perfect square possible.

Feedback

**Q.71**

Find the value of  $\log_b(2x + y)^{\log_a x \times \log_x y \times \log_y b}$ .

1 ☐  $\log_b(2x + y)$

2 ☐  $\log_a(2x + y)$



3 ☐  $\frac{1}{\log_a(2x+y)}$

4 ☐  $2x+y$



**Solution:**

**Correct Answer : 2**

**Your Answer : 2**

$$\log_b(2x+y)^{\log_a x \log_a y \log_y b}$$

$$= \log_b(2x+y)^{\frac{\log x \log y \log b}{\log a \log x \log y}}$$

$$= \log_b(2x+y)^{\log_a b}$$

$$= \frac{\log b}{\log a} \times \frac{\log(2x+y)}{\log b} = \log_a(2x+y)$$

FeedBack

**Bookmark**

**Answer key/Solution**

**Q.72**

R bought a washing machine by paying 5000 as downpayment and 28800 in two equal installments at 20% interest compounded annually at the end of each year. Find the cost of machine without installments.

1 ☐ 27000

2 ☐ 30000

3 ☐ 25000

4 ☐ 35000



**Solution:**

**Correct Answer : 1**

**Your Answer : 1**

**Bookmark**

**Answer key/Solution**

Mr. R has to repay a total of 28800 in two installments. So each installment will be of Rs. 14400 each. Principal borrowed

$$\text{is } P = \frac{14400}{1.2} + \frac{14400}{(1.2)^2} = 12000 + 10000$$

So, total cost of washing machine is  $22000 + 5000 = 27000$ .

FeedBack

Q.73

If  $a : c : e$  is  $4 : 3 : 5$  and  $b : d : e : f$  is  $7 : 6 : 4 : 3$  and also  $(a + f)$  is equal to 93, then find  $(a + b + c + d + e + f)$ .

1 ☐ 300

2 ☐ 384

3 ☐ 250

4 ☐ 444



**Solution:**

**Correct Answer : 2**

**Your Answer : 2**

$a : c : e = 4 : 3 : 5 \times 4 \rightarrow 16 : 12 : 20$   
and  $b : d : e : f = 7 : 6 : 4 : 3 \times 5 \rightarrow 35 : 30 : 20 : 15$   
 $\Rightarrow a : b : c : d : e : f = 16 : 35 : 12 : 30 : 20 : 15$   
 $\Rightarrow a + b + c + d + e + f = 128k$   
where  $a + f = 31k = 93 \Rightarrow k = 3$   
Therefore, the required sum  $= 128 \times 3 = 384$

FeedBack

Bookmark

Answer key/Solution

Q.74

If  $y = |x + 10| - |x - 10|$  for any real 'x', then how many integral value(s) can y take?

1 ☐ 40

2 ☐ 21

3 ☐ 41

4 ☐ Infinite

**Solution:**

**Correct Answer : 3**

'y' will take its minimum value of -20 at  $x = -10$  and maximum value of 20 at  $x = 10$ .  
So, from -20 to 20, there are 41 integral values that y can take.

FeedBack

Bookmark

Answer key/Solution

Q.75

If a, b and c be non-zero numbers such that the average of 2a and 3b equals the average of b and 3c, then what is the average of a and b?

1 ☐  $3c/2$

2 ☐  $3c$

3 ☐  $3c/4$

4 ☐  $c/2$

**Solution:**

**Correct Answer : 3**

$$\frac{2a+3b}{2} = \frac{b+3c}{2}$$

$$\Rightarrow 2a+2b=3c$$

$$\Rightarrow a+b=\frac{3c}{2}$$

$$\Rightarrow \frac{a+b}{2} = \frac{3c}{4}$$

FeedBack

 **Bookmark**

 **Answer key/Solution**

**Q.76**

A retailer has  $n$  stones of distinct integral weights (in kg) by which he can measure from 1 kg to 11 kg keeping them on either side of the weighing machine. Find the minimum value of  $n$ .

1 ☐ 4

2 ☐ 11

3 ☐ 6

4 ☐ 3

**Solution:**

**Correct Answer : 4**

 **Bookmark**

 **Answer key/Solution**

If we take 3 weights such that those three give all possible numbers ranging from 1 to 11, our purpose will be solved. So, if we take three weights of 1 kg, 3 kg, 9 kg, weights till 11 kg can be measured as

$$1 \text{ kg} = 1 \text{ kg}$$

$$2 \text{ kg} = 3 - 1$$

$$4 \text{ kg} = 3 + 1$$

$$5 \text{ kg} = 9 - (3 + 1)$$

$$6 \text{ kg} = 9 - 3$$

$$7 \text{ kg} = (9 + 1) - 3$$

$$8 \text{ kg} = 9 - 1$$

$$10 \text{ kg} = 9 + 1 \text{ and}$$

$$11 \text{ kg} = (9 + 3) - 1$$

FeedBack

Q.77

Which of the following statements is false?

- 1 ☐ Perpendicular distance between the lines  $y = 5$  and  $y = -7$  is 12
- 2 ☐ In the standard equation of a line  $ax + by + c = 0$ , if  $c = 0$ , the line passes through origin
- 3 ☐ Line  $x = 2$  will be parallel to y-axis
- 4 ☐ Line  $3x + 5y = 8$  passes through the point (1,2)

Solution:

Correct Answer : 4

Only statement (4) is false, as we put (1,2) in given equation it won't satisfy.

Feedback

Bookmark

Answer key/Solution

Q.78

While walking at a speed of 25 km/hr, Ramesh reaches his office 5 minutes late. If he were walking at the speed of 30 km/hr, he would have reached his office 10 minutes early. At what speed (in km/ hr) should he be walking to reach office on time?

- 1 ☐ 26.47
- 2 ☐ 16.67
- 3 ☐ 33.33
- 4 ☐ 23.42



Solution:

Correct Answer : 1

Your Answer : 1

Let distance and time be D and T respectively.

$$\text{Now, } \frac{D}{25} - \frac{D}{30} = \frac{15}{60} \Rightarrow D = 15 \times \frac{5}{2}$$

$$\text{And time taken in first case} = \frac{15 \times \frac{5}{2}}{25} = \frac{3}{2} \times 60 = 90 \text{ minutes}$$

Therefore, required time = 85 minutes

$$\text{So, his speed to reach on time} = \frac{D}{T} = \frac{15 \times \frac{5}{2}}{\frac{17}{12}} = 26.47 \text{ km/h}$$

Feedback

Bookmark

Answer key/Solution

Q.79

If  $n$  is a number having exactly 7 factors, then find the number of factors of  $n^2$ .

Solution:

Correct Answer : 13

If  $n$  has 7 factors i.e  $(6+1) \times 1$ , it is of the type  $(\text{prime})^6$ .

So,  $n^2$  will be of type  $(\text{prime})^{12}$ . So, number of factors will be 13.

FeedBack

Bookmark

Answer key/Solution

Q.80

A class has 20 boys and 10 girls. If the average weight of boys are interchanged with average weight of girls in the class, the new average weight of the class increases by 2. The average of average weight of boys and average weight of girls is how much more than the average weight of the class?

1 ☐ 8

2 ☐ 5

3 ☐ 3

4 ☐ 1

Solution:

Correct Answer : 4

Bookmark

Answer key/Solution

Let the average weight of boys be  $x$  and that of girls be  $y$ .

Sum of the weight of boys =  $20x$

Sum of the weight of girls =  $10y$

$$\therefore \text{Average weight of the class} = \frac{20x + 10y}{30}$$

$$\text{Now if their average weights are interchanged then average weight of the class} = \frac{20y + 10x}{30}$$

$$\therefore \frac{20x + 10y}{30} + 2 = \frac{20y + 10x}{30}$$

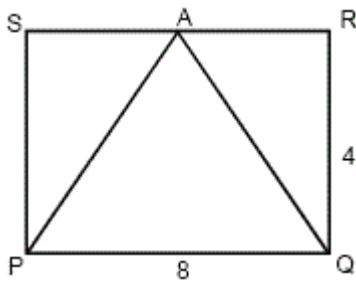
$$y - x = 6.$$

$$\text{Now, } \frac{x + y}{2} - \left( \frac{20x + 10y}{30} \right) = \frac{y - x}{6} = \frac{6}{6} = 1.$$

FeedBack

Q.81

PQRS is a rectangle having dimension  $4 \times 8$ , as shown in the figure given below. If A is a point on side RS, then find the minimum possible value for  $(AP + AQ)$ .



- 1 ☐  $4\sqrt{5}$
- 2 ☐  $8\sqrt{2}$
- 3 ☐  $8\sqrt{5}$
- 4 ☐ Cannot be determined

**Solution:**

**Correct Answer : 2**

🔖 Bookmark

🔑 Answer key/Solution

Minimum possible value of  $AP + AQ$  will be when A is at mid point, as to find AP and AQ we have to do the square of AS and AR.

So, in triangle ARQ,  $AQ = \sqrt{AR^2 + RQ^2} = 4\sqrt{2}$

and, in triangle APS,  $AP = \sqrt{AS^2 + PS^2} = 4\sqrt{2}$

Hence, the required value of  $AP + AQ = 8\sqrt{2}$

Feedback

Q.82

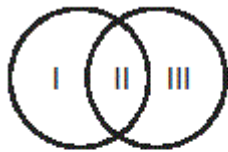
The maximum number of regions formed using two overlapping congruent circles is 3. The maximum number of regions formed using three overlapping congruent circles is 7. Find the maximum number of regions that can be formed using four overlapping congruent circles.

- 1 ☐ 10
- 2 ☐ 11
- 3 ☐ 13
- 4 ☐ 9

**Solution:**

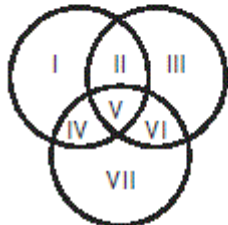
**Correct Answer : 3**

Two overlapping circle:



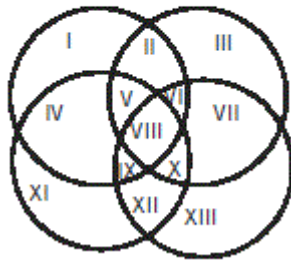
3 regions

Three overlapping circles:



7 regions

Four overlapping circles:



13 regions

FeedBack

Bookmark

Answer key/Solution

**Q.83**

If X and Y started a business by investing Rs. 300 and Rs. 500 respectively. After 4 months Z also invested in the business with Rs. 800. If after one year the profit earned in the business is Rs.4000, then the share (in Rs.) of Y and Z in it taken together is



**Solution:**

**Correct Answer : 3100**

**Your Answer : 3100**

	x	y	z
Investment ratio	300	500	800
time	12	12	8

Therefore, ratio = 9 : 15 : 16

So, share of Y and Z together in it =  $\frac{31}{40} \times 4000 = 3100$

FeedBack

Bookmark

Answer key/Solution

Q.84

Garvit was used to sell onions at marked price only. But due to excessive supply of onions, he was forced to offer 50% discount on it due to which his profit percentage comes down to 1/3rd of the original profit percentage. What is the ratio of marked price to the cost price of the onions?

1 ☐ 5 : 1

2 ☐ 6 : 1

3 ☐ 4 : 1

4 ☐ 8 : 1



**Solution:**

**Correct Answer : 3**

**Your Answer : 3**

Let marked price = 100 and cost price be C.

Discount offered = 50

So, selling price = 50

$$\text{Also, } \frac{50 - C}{C} \times 100 = \frac{1}{3} \times \frac{100 - C}{C} \times 100$$

Solving it, we get C = 25

So, required ratio = 100 : 25 = 4 : 1

FeedBack

Bookmark

Answer key/Solution

Q.85

Vikram bought two different varieties of rice R1 and R2 costing Rs. 20/kg and Rs. 50/kg respectively. He mixes them in the ratio 3 : 2 and sells them at Rs. 50/kg. What is his profit percentage (up to two decimal places)?



**Solution:**

**Correct Answer : 56.25**

**Your Answer : 56.25**

Let Vikram mixes 3 kg and 2 kg of R1 and R2 respectively.

$$\text{So, cost price of mixture per kg} = \frac{(20 \times 3 + 50 \times 2)}{5} = \text{Rs. 32}$$

Selling price = Rs. 50

$$\text{So, profit percentage} = \frac{50 - 32}{32} \times 100 = 56.25$$

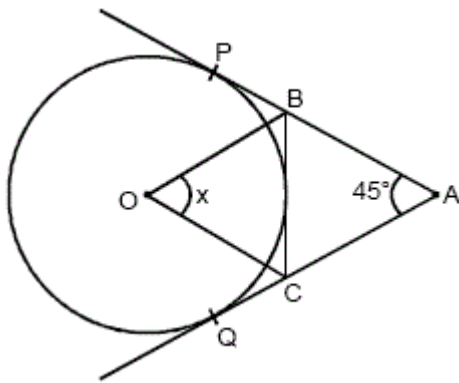
FeedBack

Bookmark

Answer key/Solution



Q.86



AP, AQ and BC are three tangents to the circle, having centre O, as shown in the above figure. Find the measure (in degree) of angle (BOC).

1 ☐ 67.5

2 ☐ 90

3 ☐ 45

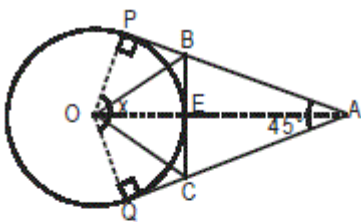
4 ☐ 30

**Solution:**

**Correct Answer : 1**

**Bookmark**

**Answer key/Solution**



$\triangle OPA$  and  $\triangle OQA$  are congruent

$$\text{So, } \angle OAP = \angle OAQ = \frac{45}{2} = 22.5^\circ$$

$$\therefore \angle POA = 180^\circ - (90 + 22.5) = 67.5^\circ$$

Also,  $\triangle OPB$  and  $\triangle OEB$  are congruent

$$\text{So, } \angle BOE = \angle BOP = \frac{67.5}{2}$$

$$\text{Similarly, } \angle COE = \angle COQ = \frac{67.5}{2}$$

$$\therefore \angle BOC = \angle BOE + \angle COE = 67.5$$

FeedBack

Q.87

If  $\frac{a}{b} + \frac{c}{d} = 3$  and  $\frac{a}{d} - \frac{c}{b} = 9$ , then the value of  $\frac{a}{c}$  is

1 ☐  $\frac{b+3d}{d-3b}$

2 ☐  $\frac{b+d}{b-d}$

3 ☐  $\frac{d-3b}{b+3d}$

4 ☐  $\frac{d+3b}{b-3d}$



**Solution:**

**Correct Answer : 4**

**Your Answer : 4**

$$\frac{a}{b} + \frac{c}{d} = 3 \text{ and } \frac{a}{d} - \frac{c}{b} = 9$$

$$\frac{a}{b^2} + \frac{c}{bd} = \frac{3}{b} \text{ and } \frac{a}{d^2} - \frac{c}{bd} = \frac{9}{d}$$

$$\frac{a}{b^2} + \frac{a}{d^2} = \frac{3}{b} + \frac{9}{d}$$

$$a \left( \frac{d^2 + b^2}{db} \right) = 3d + 9b \dots(i)$$

$$\frac{a}{db} + \frac{c}{d^2} = \frac{3}{d} \text{ and } \frac{a}{db} - \frac{c}{b^2} = \frac{9}{b}$$

$$\frac{c}{d^2} + \frac{c}{b^2} = \frac{3}{d} - \frac{9}{b}$$

$$c \left( \frac{b^2 + d^2}{db} \right) = 3b - 9d \dots(ii)$$

$$\frac{(i)}{(ii)} = \frac{a}{c} = \frac{d+3b}{b-3d}$$

FeedBack

Bookmark

Answer key/Solution

**Q.88**

A special bike is designed in such a way that the front wheel travels two more rounds as compared to the rear wheel when the bike travels 80 m. Had the circumference of front wheel was 25% more and that of rear wheel was 3/5th times more than the original, then the front wheel would have travelled 3 more rounds than the rear wheel for the same given distance. What is the circumference of the rear wheel?

1 ☐ 8 m

2 ☐ 10 m

3 ☐ 16 m

4 ☐ None of these

**Solution:**

**Correct Answer : 2**

Let rear wheel take  $x$  rounds, then front wheel will take  $x + 2$  rounds.

$$\text{The circumference of front wheel} = \frac{80}{x+2}$$

$$\text{The circumference of rear wheel} = \frac{80}{x}$$

$$\text{Now, new circumference of front wheel will be} = \frac{5}{4} \times \frac{80}{x+2} = \frac{100}{x+2}$$

$$\text{New circumference of rear wheel will be} = \frac{8}{5} \times \frac{80}{x} = \frac{128}{x}$$

$$\text{So, number of rounds of front wheel} = \frac{80}{\frac{100}{x+2}} = \frac{4}{5}(x+2)$$

$$\text{and number of rounds of rear wheel} = \frac{80}{\frac{128}{x}} = \frac{5}{8}x$$

$$\frac{4}{5}(x+2) - \frac{5}{8}x = 3 \Rightarrow x = 8$$

$$\text{Circumference of rear wheel} = \frac{80}{x} = \frac{80}{8} = 10 \text{ m}$$

Feedback

Bookmark

Answer key/Solution

**Q.89**

Sita is thrice as efficient as Geeta. Geeta can complete a piece of work in 20 days. Geeta worked alone for some days and then Sita joined her. If the work gets completed in 14 days, then for how many days did Geeta work alone?

**Solution:**

**Correct Answer : 12**

Bookmark

Answer key/Solution

Assuming Geeta's rate of doing work is 1 unit/day and hence total work to be done becomes 20 units.

Accordingly, Sita will do 3 units/day

Let Geeta work alone for  $x$  days. Then, together they will work for  $14 - x$  days

Therefore,  $x \times 1 + (14 - x)3 = 20$

$x = 12$  days

Feedback

**Q.90**

If the 2nd term of a Geometric Progression is 3.5 and the 5th term is  $2401/16$ , then find the 4th term of the same series.

1 ☐ 343/4

2 ☐ 343/8

3 ☐ 49/8

4 ☐ 49/16

×

**Solution:**

**Correct Answer : 2**

**Your Answer : 1**

$$\frac{ar^4}{ar} = \frac{2401}{16 \times 3.5} = \frac{343}{8} = r^3$$
$$\Rightarrow r = \frac{7}{2}$$

Therefore,  $a = 3.5 \times 2 / 7 = 1$

Therefore, 4<sup>th</sup> term =  $ar^3 = 343/8$

FeedBack

🔖 Bookmark

🔑 Answer key/Solution

**Q.91**

Find the remainder when  $41^{2184}$  is divided by 100.

**Solution:**

**Correct Answer : 61**

🔖 Bookmark

🔑 Answer key/Solution

The last digit of a number is 1, then last two-digits can be found as

In  $41^{2184}$  multiply tens digit by last digit of power i.e,  $4 \times 4 = 16$ . So, 6 will be the tens digit of required number.

So, Remainder on dividing it by 100 will be the last two digits of  $41^{2184} = 61$

FeedBack

**Q.92**

Find the sum of the following infinite series:

$$1 + \frac{4}{7} + \frac{9}{7^2} + \frac{16}{7^3} + \frac{25}{7^4} + \dots$$

1 ☐ 27/14

2 ☐ 21/13

3 ☐ 49/27

4 ☐ 256/147

**Solution:**

**Correct Answer : 3**

$$\text{We have } S_n = 1 + \frac{4}{7} + \frac{9}{7^2} + \frac{16}{7^3} + \dots \quad \dots(1)$$

$$\frac{S_n}{7} = \frac{1}{7} + \frac{4}{7^2} + \frac{9}{7^3} + \frac{16}{7^4} + \dots \quad \dots(2)$$

Subtracting (2) from (1)

$$S_n \left( \frac{6}{7} \right) = 1 + \frac{3}{7} + \frac{5}{7^2} + \frac{7}{7^3} \quad \dots(3)$$

Multiply again (3) by  $\frac{1}{7}$

$$S_n \left( \frac{6}{7^2} \right) = \frac{1}{7} + \frac{3}{7^2} + \frac{5}{7^3} + \frac{7}{7^4} \quad \dots(4)$$

Subtracting (4) from (3)

$$S_n \left( \frac{36}{49} \right) = 1 + \frac{2}{7} + \frac{2}{7^2} + \frac{2}{7^3}$$

$$S_n \left( \frac{36}{49} \right) = 1 + \frac{2}{7} \left[ \frac{1}{\left( 1 - \frac{2}{7} \right)} \right]$$

$$S_n = \frac{49}{27}$$

FeedBack

🔖 Bookmark

🔍 Answer key/Solution

**Q.93**

**Find the number of perfect squares less than  $(14141)_5$ .**

1 ☐ 36

2 ☐ 35

3 ☐ 34

4 ☐ Cannot be determined

**Solution:**

**Correct Answer : 2**

 **Bookmark**

 **Answer key/Solution**

First lets convert  $(14141)_5$  in base 10 as

$$1 \times 5^4 + 4 \times 5^3 + 1 \times 5^2 + 4 \times 5^1 + 1 \times 5^0 = 1171 = 34.21^2$$

So, 35 perfect squares are there less than the given number as 0 is also counted as a perfect square.

FeedBack

**Q.94**

**M = 728y15x324 is a 10-digit natural number, where x and y are single digits. How many values can (x + y) take for which M is a multiple of 48?**

1 ☐ 6

2 ☐ 4

3 ☐ 2

4 ☐ 0

**Solution:**

**Correct Answer : 4**

 **Bookmark**

 **Answer key/Solution**

For number to be divisible by 48, it must be divisible by 16 and 3 both. For number to be divisible by 16, it must be divisible by 8 also and since 'M' is not divisible by 8 (checking the last 3 digits), it can never be divisible by 48 for any value of x and y.

FeedBack

**Q.95**

**The expression  $n^3 - 6n^2 + 5n$ , where n is an integer greater than 5, is always divisible by which of the following?**

1 ☐ 5

2 ☐ 6

3 ☐ 7

4 ☐ 9

**Solution:**

**Correct Answer : 2**

$$n^3 - 6n^2 + 5n = n(n^2 - 6n + 5) = n(n - 1)(n - 2) - 3n(n - 1)$$

The product of  $n$ ,  $n - 1$  and  $n - 2$  be always divisible by 6.

The product of 2 consecutive integers  $n$  and  $n - 1$  will be even as one of them is even.

Hence  $3n(n - 1)$  will be divisible by 6.

So, sum of 2 multiples of 6 will be always divisible by 6.

FeedBack

🔖 Bookmark

🔑 Answer key/Solution

**Q.96**

If  $a$  and  $b$  are the roots of the equation  $x^2 - 4x - 5 = 0$ , the which of the following equation has its roots as  $a^3$  and  $b^3$ ?

1 ☐  $x^2 - 5x + 6 = 0$

2 ☐  $x^2 - 24x + 25 = 0$

3 ☐  $x^2 - 124x + 125 = 0$

4 ☐  $x^2 - 124x - 125 = 0$

**Solution:**

**Correct Answer : 4**

Roots,  $a$  and  $b$ , of equation  $x^2 - 4x - 5 = 0$  are  $-1$  and  $5$ .

So,  $a^3$  and  $b^3$  becomes  $-1$  and  $125$ .

So, equation for these two as roots is  $x^2 - 124x - 125 = 0$

FeedBack

🔖 Bookmark

🔑 Answer key/Solution

**Q.97**

In a stationary shop, cost of 4 pencils, 6 erasers and 9 sharpeners is Rs. 305 whereas cost of 3 pencils, 4 erasers and 2 sharpeners is Rs. 145. What is the cost (in Rs.) of 5 pencils, 8 erasers and 16 sharpeners in the shop?

**Solution:**

**Correct Answer : 465**

Let pencils, erasers and sharpeners are denoted as  $p$ ,  $e$  and  $s$  respectively.

$$\text{So, } 4p + 6e + 9s = 305 \quad \dots(i)$$

$$\text{also, } 3p + 4e + 2s = 145 \quad \dots(ii)$$

Subtracting, (ii) from (i),

$$p + 2e + 7s = 160$$

$$\text{So, cost of required numbers} = 5p + 8e + 16s = 305 + 160 = 465$$

FeedBack

🔖 Bookmark

🔑 Answer key/Solution

Q.98

Excluding stoppages, the speed of a bus is 120 km/h and including stoppages, it is 90 km/h. For how many minutes does the bus stop per hour?

1 ☐ 10

2 ☐ 15

3 ☐ 30

4 ☐ Cannot be determined

**Solution:**

**Correct Answer : 2**

Excluding stoppages,  
bus travels 120 km in one hour.  
Including stoppages, bus travels 90 km in one hour.  
So, bus stops for 30 km in one hour.  
and speed of bus is 120 km/h

So, bus stops for  $\frac{30}{120} = \frac{1}{4}$  hr = 15 minutes.

Feedback

 **Bookmark**

 **Answer key/Solution**

Q.99

Sum of the roots of a quadratic equation is 1 less than the product of its roots, where one of the roots is 1 more than the other root. Find the constant term of the quadratic equation.

1 ☐ either 2 or 3

2 ☐ either 6 or 0

3 ☐ either 0 or -1

4 ☐ None of these

**Solution:**

**Correct Answer : 2**

Let roots of the equation be  $a$  and  $a + 1$ .  
So,  $a + a + 1 = a(a + 1) - 1$   
This implies,  $a = -1$  and  $2$   
So, roots can be either  $-1, 0$  or  $2, 3$   
So, equations are  
 $(x + 1)(x - 0) = 0$  or  $(x - 2)(x - 3) = 0$   
 $x^2 + x = 0$  or  $x^2 - 5x + 6 = 0$   
So, constant terms can be either  $6$  or  $0$ .

Feedback

 **Bookmark**

 **Answer key/Solution**



Q.100

What is the probability of choosing 3 letters, out of which at least 2 are vowels, from the 26 letters of English alphabet?

1 ☐ 5/36

2 ☐ 11/130

3 ☐ 22/130

4 ☐ None of these

**Solution:**

**Correct Answer : 2**

$$\text{Probability of choosing 2 vowels} = \frac{{}^5C_2 \times 21}{{}^{26}C_3}$$

$$\text{Probability of choosing 3 vowels} = \frac{{}^5C_3}{{}^{26}C_3}$$

$$\text{So, the required probability} = \frac{11}{130}$$

FeedBack

 **Bookmark**

 **Answer key/Solution**