

Q1. DIRECTIONS for question 1: The sentences given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the five sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. India has recently embarked on a similar initiative by establishing a comprehensive disaster database system.
2. Data on these communities can be used to pursue 'risk-informed development'.
3. For instance, road infrastructure can be built by calculating the intensity of floods and determining the types of materials needed to construct durable roads.
4. If we are to save lives and prevent damage to economies, it is critical to identify the most vulnerable populations.
5. There is a way to dramatically cut down on the number of people impacted by national disasters, and that is, by using data.

Your Answer:445231 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	24
Avg. time spent on this question by all students	171
Difficulty Level	D
Avg. time spent on this question by students who got this question right	167
% of students who attempted this question	37.04
% of students who got the question right of those who attempted	19.41

[Video Solution](#)

Text Solution

Sentence 1: Sentence 1 talks about a recent "similar" development.
Sentence 2: The demonstrative adjective 'these' in sentence 2 indicates that there has to be a sentence prior to this sentence.
Sentence 3: Sentence 3 begins with the words "For instance" and this can follow another sentence.
Sentence 4: Sentence 4 has the clues "save lives and prevent damage to economies".
Sentence 5: Sentence 5 is an independent sentence that can begin the paragraph.
Sentence 5 is the best sentence to begin the paragraph. It introduces the topic of discussion: cut down on the number of people impacted...
Sentences 5 and 4 form a logical block. "dramatically cut down on the number of people impacted" in sentence 5 links with "save lives and prevent damage to economies" in sentence 4. So sentence 5 is followed by sentence 4.
Sentences 4 and 2 form another logical block. "identify the most vulnerable populations" in sentence 4 links with "Data on these communities" in sentence 2. So sentence 2 follows sentence 4.
Sentence 3 (For instance) exemplifies "risk-informed development" given in sentence 2. Sentence 3 follows sentence 2.
Sentence 1 talks about a recent development and concludes the paragraph. "embarked on a similar initiative" in sentence (1) links with "for instance, road infrastructure can be built" in sentence (3). "comprehensive disaster database system" in sentence 1 links with "calculating the intensity of floods and determining the types of materials needed to construct durable roads" in sentence 3. So, 54231.

Ans: (54231)

undefined

Q2. DIRECTIONS for question 2: Five sentences related to a topic are given in the question below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

1. The first set of puzzles about anteaters and elephants has to be easier than the set of puzzles about beavers and worms, which in turn has to be easier than the final set about fish.
2. Blue's Clues has gotten rid of the cleverness and originality that made Sesame Street the most beloved television program of its generation, created a plodding, literal show, and repeated each episode five times in a row.
3. The show has to start out easy - to give the viewers confidence - and then get progressively harder and harder, challenging the preschoolers more and more, drawing them into the narrative.
4. The layering of the show is what makes it possible for a child to watch the show four and five times: on each successive watching they master more and more, guessing correctly deeper into the program, until, by the end, they can anticipate every answer.
5. Blue's Clues succeeds as a story of discovery only if the clues are in proper order.

Your Answer:3 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	1
Avg. time spent on this question by all students	108
Difficulty Level	D
Avg. time spent on this question by students who got this question right	106
% of students who attempted this question	38.05
% of students who got the question right of those who attempted	22.49

[Video Solution](#)

[Text Solution](#)

Sentence 1: Sentence 1 cannot be the opening sentence of the para. It refers to the progressive increase in difficulty of some puzzles or questions posed.

Sentence 2: Sentence 2 mentions Blues's Clues and another show "Sesame Street".

Sentence 3: Sentence 3 talks about how the show has to progress.

Sentence 4: There is an important clue here: layering of the show.

Sentence 5: This sentence speaks about a condition for the Blue's Clues show to succeed.

Sentence 5 is a general sentence that begins the para. It mentions the name of a show and a condition for its success.

Sentences 5 and 3 form a logical block. "The show" in sentence 3 points to "Blue's Clues" in sentence 5. "drawing them into the narrative" in sentence 3 links with "succeeds as a story of discovery" in sentence 5. So sentence 3 follows sentence 5.

Sentences 3 and 1 form another logical block. "**has to start out easy** and then get **progressively harder and harder**" in sentence 3 links with "The first set of puzzles about anteaters and elephants **has to be easier** than the set of puzzles about beavers and worms, which in turn has to be **easier** than the final set about fish" in sentence 1. So sentence 1, which exemplifies the point made in sentence 3, follows sentence 3.

Sentence 1 is followed by sentence 4. "The layering of the show" in sentence 4 links with "The first set had to be easier" in sentence 1 and "The show has to start out easy and then get progressively harder and harder" in sentence 4. So, 5314.

Sentence 2 compares the "Blue's Clues" with the "Sesame Street" show and tells us how the former was different from the latter. This sentence runs tangent to the given para and can be a part of another para, much later in the thought flow.

Ans: (2)

undefined

DIRECTIONS for questions 3 to 8: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

The peculiarity of climate change is that the seemingly natural relationship of policy to time and certainty is inverted: it is precisely because climate change is so uncertain that we have to consider the possibility that it will bring disaster on a global scale, and it is precisely because its impact is long deferred that we must act decisively now.

Are these demands reasonable? They might be if - as James Hansen, one of the founders of climate science, has claimed - it is 'our last chance to save humanity'. But is it? Any change in temperature will inevitably benefit some species and harm others, so it probably is the last chance to save those adapted only to specific ecological niches dependent on the existing climate.

What about the impact on human beings? Any temperature variation is going to result in excess deaths from either heat or cold, but it is far from clear whether the net effect of an increase in temperature will in itself be harmful; it might even be beneficial. As for rises in sea level, the 2007 IPCC projections range from 18 to 59 centimetres - which is not enough to submerge anywhere other than the lowest-lying areas. And with regard to fresh water, everyone agrees that higher temperatures mean higher levels of precipitation, so there should be more water to go round. The 2007 IPCC report acknowledged that climate change reduces per capita water stress, and one recent study suggests that, with a temperature rise of around 2.4°C, water stress would increase for 1.2 billion people by 2100 but decrease for three billion others.

So, what is the problem? There are two: differential impacts and high-end uncertainty. Most of the negative consequences

will be felt in the earth's mid-latitudes, already the poorest parts of the world, where secondary effects such as economic disruption, disease, famine and war will be experienced most acutely. Climate change is therefore likely to have a disproportionate impact on the vulnerable and exacerbate existing inequalities. A mid-range increase in global temperatures, which might be quite pleasant in Canada, is potentially disastrous for the population of Bangladesh or Somalia. Rises in sea level will not affect most populations at all, but even a mid-range increase would make the habitats of between sixty and a hundred million additional people liable to flooding by the end of the century.

However, nobody can be confident that the effects of global warming will end there. The lowest value in the high-emissions scenario might be 2.4°C, but the highest is an alarming 6.4°C, and some scientists consider the IPCC unduly cautious. Positive feedback mechanisms - the earth's reduced albedo (reflectivity), the transformation of carbon sinks into carbon sources, or the release of methane from thawing permafrost - could push temperatures towards the top of the range and so trigger irreversible non-linear changes such as the melting of the polar ice-sheets and the disruption of thermohaline circulation in the world's oceans. Were all that to happen, much of the planet would be uninhabitable.

Climate change sceptics argue that we are not generally as moral as climate change ethics assumes, for if we were, we might not make climate change our top priority. If we were concerned about polar bears we would start by not shooting them, rather than worrying about how much ice they had left to stand on. This is a valid argument, but it misses the point that were it not for climate change, we would be giving even less thought to polar bears, and would see little connection between our actions and their fate.

Q3. Which of the following scenarios is most similar to the argument regarding polar bears that climate change sceptics use as mentioned in the last para of the passage?

- a) Climate change will lead to an increase in the numbers of chinstrap penguins but will lead to the extinction of the rare European land leech.
- b) A mid-range increase in global temperatures, which might be quite pleasant in Canada, is potentially disastrous for the population of Bangladesh or Somalia.
- c) If we were concerned about climate change, we will take decisive action now and not wait for the impact to deepen.
- d) **Helping the poor now rather than helping their descendants at the end of the century is a better indicator of our concern for the global poor.** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	8
Avg. time spent on this question by all students	312
Difficulty Level	D
Avg. time spent on this question by students who got this question right	307
% of students who attempted this question	43.39
% of students who got the question right of those who attempted	64.04

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 594

Consider the sentences: *Climate change sceptics argue that we are not generally as moral as climate change ethics assumes, for if we were, we might not make climate change our top priority. If we were concerned about polar bears we would start by not shooting them, rather than worrying about how much ice they had left to stand on.* The sceptics are trying to say that climate change ethics assume we are moral, but we are not as moral as expected. The sceptics argument about morality is that: if we were moral, even before worrying about the habitat of the polar bears (where they stand), we will stop killing them. The argument most similar to this (parallel reasoning) would be something that says – if we were really moral, even before doing X (one step), we would do Y (a different bigger argument). In other words, it is comparing two different actions and their moral correctness.

Option A: This option doesn't talk about the steps we need to take and does not compare them with respect to moral correctness. It simply talks about the effects of climate change. Hence, Option A is not the answer.

Option B: This option once again compares the effects of climate change, not the moral stance of the steps taken to mitigate it. Hence, Option B is not the answer.

Option C: This option considers just one action – taking decisive action now. It doesn't compare the moral correctness of two different actions. Hence, Option C is not the answer.

Option D: This option considers the moral correctness of two different actions – Helping the poor now rather than helping their descendants at the end of the century, and which one is the better thing to do. Hence, Option D is the answer.

Choice (D)

undefined

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Are these demands reasonable? They might be if - as James Hansen, one of the founders of climate science, has claimed - it is 'our last chance to save humanity'. But is it? Any change in temperature will inevitably benefit some species and harm others, so it probably is the last chance to save those adapted only to specific ecological niches dependent on the existing climate.

What about the impact on human beings? Any temperature variation is going to result in excess deaths from either heat or cold, but it is far from clear whether the net effect of an increase in temperature will in itself be harmful; it might even be beneficial. As for rises in sea level, the 2007 IPCC projections range from 18 to 59 centimetres - which is not enough to submerge anywhere other than the lowest-lying areas. And with regard to fresh water, everyone agrees that higher temperatures mean higher levels of precipitation, so there should be more water to go round. The 2007 IPCC report

acknowledged that climate change reduces per capita water stress, and one recent study suggests that, with a temperature rise of around 2.4°C, water stress would increase for 1.2 billion people by 2100 but decrease for three billion others.

So, what is the problem? There are two: differential impacts and high-end uncertainty. Most of the negative consequences will be felt in the earth's mid-latitudes, already the poorest parts of the world, where secondary effects such as economic disruption, disease, famine and war will be experienced most acutely. Climate change is therefore likely to have a disproportionate impact on the vulnerable and exacerbate existing inequalities. A mid-range increase in global temperatures, which might be quite pleasant in Canada, is potentially disastrous for the population of Bangladesh or Somalia. Rises in sea level will not affect most populations at all, but even a mid-range increase would make the habitats of between sixty and a hundred million additional people liable to flooding by the end of the century.

However, nobody can be confident that the effects of global warming will end there. The lowest value in the high-emissions scenario might be 2.4°C, but the highest is an alarming 6.4°C, and some scientists consider the IPCC unduly cautious. Positive feedback mechanisms - the earth's reduced albedo (reflectivity), the transformation of carbon sinks into carbon sources, or the release of methane from thawing permafrost - could push temperatures towards the top of the range and so trigger irreversible non-linear changes such as the melting of the polar ice-sheets and the disruption of thermohaline circulation in the world's oceans. Were all that to happen, much of the planet would be uninhabitable.

Climate change sceptics argue that we are not generally as moral as climate change ethics assumes, for if we were, we might not make climate change our top priority. If we were concerned about polar bears we would start by not shooting them, rather than worrying about how much ice they had left to stand on. This is a valid argument, but it misses the point that were it not for climate change, we would be giving even less thought to polar bears, and would see little connection between our actions and their fate.

Q4. Which of the following can be inferred from the third para of the passage ('What about the impact...three billion others')?

- a) Temperature variations result in the rise in sea level, which will not affect most populations at all.
- b) The rise in temperature is both beneficial and harmful.
- c) Increase in variations in temperature results in lowering water stress.
- d) **Temperature variations and rise in sea-level may lead to some benefits.** Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	6
Avg. time spent on this question by all students	117
Difficulty Level	M
Avg. time spent on this question by students who got this question right	111
% of students who attempted this question	49.28
% of students who got the question right of those who attempted	53.26

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Number of words and Explanatory notes for RC:

Number of words: 594

- What about the impact on human beings?* a. Any temperature variation is going to result in excess deaths from either heat or cold, but it is far from clear whether the net effect of an increase in temperature will in itself be harmful; it might even be beneficial. b. As for rises in sea level, the 2007 IPCC projections range from 18 to 59 centimetres – which is not enough to submerge anywhere other than the lowest-lying areas c. The 2007 IPCC report acknowledged that climate change reduces per capita water stress, and one recent study suggests that, with a temperature rise of around 2.4°C, water stress would increase for 1.2 billion people by 2100 but decrease for three billion others.

So, the idea of the para is that the impact of climate change on human beings is three-fold – effect of temperature variation, (where there is lack of clarity), rise in sea level, which will only affect the low-lying areas, and water stress, which will increase for some, but decrease for even more people.

Option A: And with regard to fresh water, everyone agrees that higher temperatures mean higher levels of precipitation. From this we can understand that temperature variations affect fresh water stock/precipitation and not sea level. Hence, Option A cannot be inferred from the para.

Option B: Any temperature variation is going to result in excess deaths from either heat or cold, but it is far from clear whether the net effect of an increase in temperature will in itself be harmful; it might even be beneficial. And with regard to fresh water, everyone agrees that higher temperatures mean higher levels of precipitation, so there should be more water to go round (beneficial). Hence, Option B can be inferred.

Option C: Higher temperatures will lead to more precipitation and hence, result in lowering of water stress. However, the effect of increase in variations in temperature with respect to water stress has not been discussed. Option C cannot be inferred.

Option D: Temperature variations maybe beneficial or harmful. Sea-level rise may be hazardous but definitely not beneficial (nothing has been mentioned). Hence, Option D cannot be inferred.

Choice (B)

undefined

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What about the impact on human beings? Any temperature variation is going to result in excess deaths from either heat or

cold, but it is far from clear whether the net effect of an increase in temperature will in itself be harmful; it might even be beneficial. As for rises in sea level, the 2007 IPCC projections range from 18 to 59 centimetres - which is not enough to submerge anywhere other than the lowest-lying areas. And with regard to fresh water, everyone agrees that higher temperatures mean higher levels of precipitation, so there should be more water to go round. The 2007 IPCC report acknowledged that climate change reduces per capita water stress, and one recent study suggests that, with a temperature rise of around 2.4°C, water stress would increase for 1.2 billion people by 2100 but decrease for three billion others.

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However, nobody can be confident that the effects of global warming will end there. The lowest value in the high-emissions scenario might be 2.4°C, but the highest is an alarming 6.4°C, and some scientists consider the IPCC unduly cautious. Positive feedback mechanisms - the earth's reduced albedo (reflectivity), the transformation of carbon sinks into carbon sources, or the release of methane from thawing permafrost - could push temperatures towards the top of the range and so trigger irreversible non-linear changes such as the melting of the polar ice-sheets and the disruption of thermohaline circulation in the world's oceans. Were all that to happen, much of the planet would be uninhabitable.

Climate change sceptics argue that we are not generally as moral as climate change ethics assumes, for if we were, we might not make climate change our top priority. If we were concerned about polar bears we would start by not shooting them, rather than worrying about how much ice they had left to stand on. This is a valid argument, but it misses the point that were it not for climate change, we would be giving even less thought to polar bears, and would see little connection between our actions and their fate.

Q5. According to the author, the seemingly natural relationship of policy to time and certainty is inverted in case of climate change because

- a) uncertainty in climate change and the deferred impact of climate change justify concrete policies.
- b) **concrete policies can only mitigate the scale of climate change because of the delay.** □ **Your answer is incorrect**
- c) policies can only delay the effects of climate change.
- d) **our current policy has adverse effects on the climate .**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	1
Avg. time spent on this question by all students	110
Difficulty Level	M
Avg. time spent on this question by students who got this question right	103
% of students who attempted this question	35.27
% of students who got the question right of those who attempted	69.81

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 594

Consider the sentence: "the seemingly natural relationship of policy to time and certainty is inverted: it is precisely because climate change is so uncertain that we have to consider the possibility that it will bring disaster on a global scale, and it is precisely because its impact is long deferred that we must act decisively now."

The logical conclusions in this sentence are: climate change (more likely includes the effects of it) is uncertain – therefore, we have to consider the scenario where the disaster will be on a global scale. We have delayed it for long – therefore, we must act now. So, the relationship is inverted here because the seriousness with which the policy must be taken is justified by how long the impact of climate change has been delayed/deferred (usually the delay means the issue is not serious enough but here it is the reverse, the author alludes) and because the damage is uncertain, we have to think it may be massive (instead of brushing it under the carpet for lack of evidence).

Option A: This represents the logic explained above – that because the effect is uncertain, we have to expect the worst and get to work; also the urgency for policies is in a way reiterated by the deferred impact of climate change. Hence, Option A is the answer.

Option B: Concrete policies are needed to deal with climate change. Whether they will be able to only mitigate it or eliminate it completely has not been discussed. Hence, Option B can be eliminated.

Option C: This is negative about policies, whereas the author calls for decisive action. Hence, Option C can be eliminated because of contradictory tone.

Option D: The policy is a consequence and not the cause. Hence, Option D can be eliminated.

Choice (A)

undefined

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temperatures, which might be quite pleasant in Canada, is potentially disastrous for the population of Bangladesh or Somalia. Rises in sea level will not affect most populations at all, but even a mid-range increase would make the habitats of between sixty and a hundred million additional people liable to flooding by the end of the century.

However, nobody can be confident that the effects of global warming will end there. The lowest value in the high-emissions scenario might be 2.4°C, but the highest is an alarming 6.4°C, and some scientists consider the IPCC unduly cautious. Positive feedback mechanisms - the earth's reduced albedo (reflectivity), the transformation of carbon sinks into carbon sources, or the release of methane from thawing permafrost - could push temperatures towards the top of the range and so trigger irreversible non-linear changes such as the melting of the polar ice-sheets and the disruption of thermohaline circulation in the world's oceans. Were all that to happen, much of the planet would be uninhabitable.

Climate change sceptics argue that we are not generally as moral as climate change ethics assumes, for if we were, we might not make climate change our top priority. If we were concerned about polar bears we would start by not shooting them, rather than worrying about how much ice they had left to stand on. This is a valid argument, but it misses the point that were it not for climate change, we would be giving even less thought to polar bears, and would see little connection between our actions and their fate.

Q6. The author mentions the highest value in high-emissions scenario to be an alarming 6.4 degree celsius to show that

- a) the adverse impact of global warming may have been understated.
- b) **the planet will soon become uninhabitable.**
- c) **the net effect of an increase in temperature will be harmful.** Your answer is incorrect
- d) **any temperature variation is going to result in excess deaths from either heat or cold.**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	5
Avg. time spent on this question by all students	87
Difficulty Level	M
Avg. time spent on this question by students who got this question right	80
% of students who attempted this question	47.78
% of students who got the question right of those who attempted	59.18

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 594

Consider the sentences: *However, nobody can be confident that the effects of global warming will end there. The lowest value in the high-emissions scenario might be 2.4°C, but the highest is an alarming 6.4°C, and some scientists consider the IPCC unduly cautious.* It can be understood that the author wants to convey two points – there is uncertainty over what the exact effects of global warming are, and secondly, even the worst-case scenario could be a conservative estimate and things could go worse.

Option A: This is true as explained above. The difference between the lowest value and the highest value is accentuated by the word 'alarming' and the additional remark that the scientists consider IPCC cautious. Now, the remark could be confusing, as some may mean to think IPCC worries needlessly. The 'cautious' is to imply that when they give a number, it is more likely to be less than the extreme – the caution is with respect to the warning. We understand that once again from the positioning of the remark – after mentioning the worst-case scenario. So, things could get worse and yet, we have not emphasized enough on the adverse effects. Option A is therefore, the answer.

Option B: This has not been stated categorically especially with respect to the temperature rise. Hence, this option can be eliminated for being an extreme extrapolation.

Option C: We haven't discussed the effects of temperature in these sentences. We are still only discussing the temperature numbers. Hence, this option can be eliminated.

Option D: While this statement is true, it was mentioned in a different context and not with respect to the temperature estimates. Hence, Option D can be eliminated.

Choice (A)

undefined

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Q7. The author criticises the argument of climate change sceptics against climate change ethics by pointing out that

- a) we have indeed made climate change our top priority.
- b) **climate change makes us worry more about polar bears' habitats than worry about their numbers.**
- c) **thanks to climate change, we see little connection between our actions and consequences.**
- d) **climate change has enhanced our awareness about the possible impact of our actions.** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	84
Difficulty Level	D
Avg. time spent on this question by students who got this question right	78
% of students who attempted this question	44.14
% of students who got the question right of those who attempted	54.17

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 594

The answer to this can be found in the lines: This is a valid argument, but it misses the point that were it not for climate change, we would be giving even less thought to polar bears, and would see little connection between our actions and their fate.

Option A: The author isn't contradicting the sceptics (who say climate change wouldn't have been top priority, not indulging in immoral acts such as killing the animals would have been our top priority) by arguing that we have made climate change our priority. In fact, the author doesn't mention whether we have made it our priority or not. Hence, Option A is not the answer.

Option B: This statement takes the argument literally. Polar bears are not the focus of the argument. They are the example for a bigger pattern. Hence, Option B is not the answer.

Option C: That 'we don't see a connection between our actions and consequences' is a negative sentence. The author's argument is more in tune with climate change discussions and its positive impact (sceptics argue that climate change talk is shallow talk, or in that effect). Hence, Option C can be eliminated.

Option D: This option talks about the positive effect of climate change, which the author uses to counter the argument of the sceptics. The author says that, if not for climate change, people would be giving even less thought to the adverse effects of their actions. Hence, Option D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 3 to 8: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

The peculiarity of climate change is that the seemingly natural relationship of policy to time and certainty is inverted: it is precisely because climate change is so uncertain that we have to consider the possibility that it will bring disaster on a global scale, and it is precisely because its impact is long deferred that we must act decisively now.

Are these demands reasonable? They might be if - as James Hansen, one of the founders of climate science, has claimed - it is 'our last chance to save humanity'. But is it? Any change in temperature will inevitably benefit some species and harm others, so it probably is the last chance to save those adapted only to specific ecological niches dependent on the existing climate.

What about the impact on human beings? Any temperature variation is going to result in excess deaths from either heat or cold, but it is far from clear whether the net effect of an increase in temperature will in itself be harmful; it might even be beneficial. As for rises in sea level, the 2007 IPCC projections range from 18 to 59 centimetres - which is not enough to submerge anywhere other than the lowest-lying areas. And with regard to fresh water, everyone agrees that higher temperatures mean higher levels of precipitation, so there should be more water to go round. The 2007 IPCC report acknowledged that climate change reduces per capita water stress, and one recent study suggests that, with a temperature rise of around 2.4°C, water stress would increase for 1.2 billion people by 2100 but decrease for three billion others.

So, what is the problem? There are two: differential impacts and high-end uncertainty. Most of the negative consequences will be felt in the earth's mid-latitudes, already the poorest parts of the world, where secondary effects such as economic disruption, disease, famine and war will be experienced most acutely. Climate change is therefore likely to have a disproportionate impact on the vulnerable and exacerbate existing inequalities. A mid-range increase in global temperatures, which might be quite pleasant in Canada, is potentially disastrous for the population of Bangladesh or Somalia. Rises in sea level will not affect most populations at all, but even a mid-range increase would make the habitats of between sixty and a hundred million additional people liable to flooding by the end of the century.

However, nobody can be confident that the effects of global warming will end there. The lowest value in the high-emissions scenario might be 2.4°C, but the highest is an alarming 6.4°C, and some scientists consider the IPCC unduly cautious. Positive feedback mechanisms - the earth's reduced albedo (reflectivity), the transformation of carbon sinks into carbon sources, or the release of methane from thawing permafrost - could push temperatures towards the top of the range and so trigger irreversible non-linear changes such as the melting of the polar ice-sheets and the disruption of thermohaline circulation in the world's oceans. Were all that to happen, much of the planet would be uninhabitable.

Climate change sceptics argue that we are not generally as moral as climate change ethics assumes, for if we were, we might not make climate change our top priority. If we were concerned about polar bears we would start by not shooting them, rather than worrying about how much ice they had left to stand on. This is a valid argument, but it misses the point that were it not for climate change, we would be giving even less thought to polar bears, and would see little connection between our actions and their fate.

Q8. Which of the following statements is the author most likely to agree with?

- a) Climate change won't impact human beings as much as it is made out to be.
- b) Policies to mitigate the impact of climate change should take ethics into account.
- c) The danger of climate change lies in the uncertainty of the degree of its adverse effects. **Your answer is correct**
- d) The impact of climate change on humanity is well-documented and clear.

Time spent / Accuracy Analysis

Time taken by you to answer this question	5
Avg. time spent on this question by all students	58
Difficulty Level	M
Avg. time spent on this question by students who got this question right	56
% of students who attempted this question	42.1
% of students who got the question right of those who attempted	82.82

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 594

Option A: The author starts with a point of view that seems to diffuse climate change concerns but the second part of the passage turns the thought on its head and explains why we should take climate change seriously. Hence, Option A is contradictory to the author's final opinion. Option A can be eliminated.

Option B: The author doesn't bring ethics into the discussion. It is the sceptics that bring the ethical viewpoints into the picture, arguing that climate change ethics assume we are moral, whereas we aren't really (according to the sceptics of climate change). Hence, Option B can be eliminated.

Option C: The author says we should act decisively now because we cannot be sure of the worst-case scenario, or what the adverse effects are. The author also conveys the message that policies should be framed because the uncertainty should push us to believe the disaster will be a global-scale one. Hence, the author will agree to the statement that the danger of climate change lies in the uncertainty of adverse effects. Understood from the statement - *There are two: differential impacts and high-end uncertainty*. Hence, Option C is the answer.

Option D: The author clearly states, as explained above, that there is uncertainty over the effects of climate change. Assuming that it is well-documented is something the author will definitely not agree with. Option D can hence, be eliminated.

Choice (C)

Q9. DIRECTIONS for question 9: The paragraph given below is followed by four alternative summaries. Choose the option that best captures the author's position.

One need not be a dry materialist to bow before the recognition that no heart goes through life unplundered by loss - all love presupposes it, be it in death or in heartbreak. Whether what is lost are feelings or atoms, grief comes, unforgiving and unpredictable, in its myriad manifestations. When love is lost, we lose the part of ourselves that did the loving - a part that, depending on the magnitude of the love, can come to approximate the whole of who we are. But we also gain something - out of the burning embers of the loss arises an ashen humility. We are made "of the earth" - we bow down low, we become crust, and each breath seems to draw from the magmatic center of the planet that is our being. It is only when we give ourselves over to it completely that we can begin to take ourselves back, to rise, to live again.

- a) Only when we learn humility can the loss of love - that no heart can really escape - be allayed to help a person rise again.
- b) **While every heart that loves is vulnerable to loss, humility balmsthe grief and helps us live again.**
- c) **Every materialist has to suffer grief that comes with love, death, or heartbreak and only a humble acknowledgement of its magnitude can take it away.**
- d) **While no heart escapes grief, loss of love, which could result in losing a part or all of us, can also bring humility imperative for us to relive.**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	154
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	152
% of students who attempted this question	28.53
% of students who got the question right of those who attempted	53.46

[Video Solution](#)

[Text Solution](#)

Intro – Every heart suffers because of loss. Loss of love through the loss of feelings (heartbreak) or atoms (death) leads to grief.

Elaboration – When we lose love we can sometimes lose a part or all of us.

The usual counter-idea – But, there is something to be gained – humility.

Conclusion – When we are humbled by grief, we learn to live again.

Option A: The author conveys that there is something to be gained when love is lost – humility. That cannot translate to 'only when we learn humility' can the loss of love be allayed, if it is allayed in the first place. Hence, Option A is not the answer.

Option B: The option seems to convey that hearts that love are vulnerable to loss. That is different from saying **every heart** is vulnerable to loss. The option also misses the sub-idea that loss results in gaining humility. Hence, Option B is not the answer.

Option C: The para says one doesn't have to be a materialist to recognise how every heart is vulnerable to loss. That's definitely not the same thing as saying 'every materialist has to suffer grief.' Also, love, death and heartbreak are not three separate reasons for grief. The loss of love could be because of heartbreak or death. Hence, Option C is not the answer.

Option D: This option mentions all the ideas – no heart escapes grief/ loss of love can bring humility/ humility can help us relive. Hence, Option D is the answer.

Choice (D)

undefined

Q10. DIRECTIONS for question 10: The sentences given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the five sentences and key in the

sequence of five numbers as your answer, in the input box given below the question.

1. Zig Ziglar once said, "If you want to fly with the eagles, you can't continue to scratch with the turkeys", and Baron de Rothschild once wrote, "Make no useless acquaintances."
2. If you are really serious about being the best and moving to the top of your field, you cannot afford to spend your time with people who are going nowhere in their lives, no matter how nice they are.
3. You must hence set high standards for your friends and associates and refuse to compromise.
4. However, many people easily get into bad relationships and form useless friendships early in their careers.
5. In this sense, you must be selfish with regard to yourself and your future ambitions.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	14
Avg. time spent on this question by all students	127
Difficulty Level	D
Avg. time spent on this question by students who got this question right	121
% of students who attempted this question	33.26
% of students who got the question right of those who attempted	14.22

[Video Solution](#)

[Text Solution](#)

Sentence 1: Sentence 1 has the quotes of two personalities. Sentence 1 could serve as a possible opening sentence of the para.

Sentence 2: This sentence has an if-then sequence. It tells us an important point: You cannot afford to spend your time with people who are going nowhere in their lives.

Sentence 3: Sentence 3 is a "solution to a problem" sentence. It has the conclusion indicator 'hence'.

Sentence 4: Sentence 4 has the contrast indicator 'however'.

Sentence 5: The demonstrative adjective 'this' in sentence 5 indicates that another related sentence must precede this sentence. Sentence 5 sounds like a "solution to a situation" sentence.

On a careful reading of the sentences, it can be observed that sentence 1 is a general sentence that can begin the paragraph.

Sentences 1 and 2 form a logical block. "you cannot afford to spend your time with people who are going nowhere in their lives" in sentence 2 links with "you can't continue to scratch with the turkeys and make no useless acquaintances" in sentence 1. Also "If you want to fly with the eagles" in sentence 1 links with "If you are really serious about being the best and moving to the top of your field" in sentence 2.

Sentence 2 is followed by sentence 5. "you must be selfish with regard to yourself and your future ambitions" in sentence 5 links with "If you are really serious about being the best and moving to the top of your field" in sentence 2. "In this sense" in sentence 5 links with the point made in sentence 2.

Sentence 5 is followed by sentence 3. "You must hence set high standards refuse to compromise" in sentence 3 links with "you must be selfish with regard to yourself" in sentence 5.

Sentence 4 is a standalone sentence which is best left at the end of the para. It is a sentence with a negative tone and has the contrast marker 'however'. The remaining sentences talk about the importance of making no useless acquaintances or friendships while sentence 4 talks about the opposite reality "many people easily get into bad relationships and form useless friendships". So, 12534 Ans: (12534)

undefined

DIRECTIONS for questions 11 to 16: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks - the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its neighbours and now mass protests in Hong Kong and the risk of a crackdown - have multiplied, financial markets have

remained buoyant. Oil prices have been falling, and global stock markets have, overall, reached new highs. Yes, financial markets in troubled countries - for example, Russia's currency, equity and bond markets - have been negatively affected, but the more generalised contagion to global financial markets that geopolitical tensions typically engender has failed to materialise.

Why the indifference? Are investors too complacent, or is their apparent lack of concern rational, given that the actual economic and financial impact of current geopolitical risks - at least so far - has been modest?

Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.

Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. So, though sanctions and counter-sanctions between the west and Russia have increased, they are not causing significant economic and financial damage to the EU or the US.

Third, the turmoil in the Middle East has not triggered a significant shock to oil supplies and prices like those that occurred in 1973, 1979 and 1990. On the contrary, there is excess capacity in global oil markets.

Finally, the one Middle East conflict that could cause oil prices to spike - a war between Israel and Iran - is a risk that is contained, for now, by ongoing international negotiations with Iran to contain its nuclear programme.

There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind. First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US. Markets tend to disregard the risks of events whose probability is hard to assess, but those have a major impact on confidence when they do occur.

Second, markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's civil war, will not escalate or spread.

Third, geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play. Today the situation in Hong Kong, together with the news of further weakening in the Chinese economy, could trigger global financial havoc. Or the Federal Reserve could spark financial contagion by exiting zero rates sooner and faster than markets expect. Or the eurozone could relapse into recession and crisis, reviving the risk of redenomination if the monetary union breaks up. The interaction of any of these global factors with a variety of regional and local sources of geopolitical tension could be dangerously combustible.

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Q11. Which of the following is a message that the author is trying to convey in the last para of the passage?

- a) Another World War cannot be ruled out.
- b) Global markets are ill-prepared to deal with financial contagion. Your answer is incorrect
- c) Financial markets didn't learn the lessons of the First World War.
- d) The financial markets are not pricing in low-probability, high impact risks properly.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	103
Avg. time spent on this question by all students	278
Difficulty Level	M
Avg. time spent on this question by students who got this question right	282
% of students who attempted this question	42.74
% of students who got the question right of those who attempted	37.71

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 582

Option A: The author gave the First World War as an example of the financial markets' inability to price in low-probability, high impact risks. That doesn't mean the author suggests there will be a war in the near future, since the author gave us no reasons to believe conflicts would get bigger and escalate. The author is only discussing scenarios where conflicts can upset financial markets. Hence, Option A is not the answer.

Option B: The author has largely discussed possible scenarios with respect to global geopolitics and global markets. How financial markets will deal with bad situations hasn't been discussed anywhere in the passage, leave alone the last para. Option B is therefore, not the answer.

Option C: The financial markets were poor at correctly pricing risks back then and they are the same right now. There is not enough evidence to believe the author suggests that the inability then and the inability now are connected to each other, that the market has remained the same, that the lessons should have been learnt. The author's primary purpose is not to blame the markets. Based on the tone of the passage (where the author analyses and also gives reasons why the markets are not panicking) we can say that the author's message in the last para is not critical about what the markets should have learnt but didn't. The author is simply discussing possible scenarios. Option C is close but not the answer.

Option D: In the beginning of the para, the author mentions that the financial contagion is possible despite markets being 'rationally complacent'. The author goes on to say that the markets have been for a long time poor at pricing low probability, high impact risks. So, the author's main message is that the markets sometimes don't account for high-impact, low probability risks and tend to ignore them. Hence, Option D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 11 to 16: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks - the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its neighbours and now mass protests in Hong Kong and the risk of a crackdown - have multiplied, financial markets have remained buoyant. Oil prices have been falling, and global stock markets have, overall, reached new highs. Yes, financial markets in troubled countries - for example, Russia's currency, equity and bond markets - have been negatively affected, but the more generalised contagion to global financial markets that geopolitical tensions typically engender has failed to materialise.

Why the indifference? Are investors too complacent, or is their apparent lack of concern rational, given that the actual economic and financial impact of current geopolitical risks - at least so far - has been modest?

Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.

Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. So, though sanctions and counter-sanctions between the west and Russia have increased, they are not causing significant economic and financial damage to the EU or the US.

Third, the turmoil in the Middle East has not triggered a significant shock to oil supplies and prices like those that occurred in 1973, 1979 and 1990. On the contrary, there is excess capacity in global oil markets.

Finally, the one Middle East conflict that could cause oil prices to spike - a war between Israel and Iran - is a risk that is contained, for now, by ongoing international negotiations with Iran to contain its nuclear programme.

There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind. First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US. Markets tend to disregard the risks of events whose probability is hard to assess, but those have a major impact on confidence when they do occur.

Second, markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's

civil war, will not escalate or spread.

Third, geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play. Today the situation in Hong Kong, together with the news of further weakening in the Chinese economy, could trigger global financial havoc. Or the Federal Reserve could spark financial contagion by exiting zero rates sooner and faster than markets expect. Or the eurozone could relapse into recession and crisis, reviving the risk of redenomination if the monetary union breaks up. The interaction of any of these global factors with a variety of regional and local sources of geopolitical tension could be dangerously combustible.

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Q12. The paradox that seems to have emerged in global financial markets this year can best be restated as:

- a) Financial markets are upbeat despite downcast global geopolitics.
- b) **Powerful negative forces like Russia, ISIS and China haven't brought down the financial markets.**
- c) **While there are geopolitical upheavals in one part of the world, financial markets have done well in other parts.** Your answer is incorrect
- d) **Financial markets are unable to gauge the risk in the current geopolitical conditions.**

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	214
Avg. time spent on this question by all students	95
Difficulty Level	D
Avg. time spent on this question by students who got this question right	86
% of students who attempted this question	37.56
% of students who got the question right of those who attempted	60.53

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 582

The paradox has been clearly stated in the first para: An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks (the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its neighbours and now mass protests in Hong Kong and the risk of a crackdown) have multiplied, financial markets have remained buoyant. A paradox is an argument that apparently derives self-contradictory conclusions.

Paradox: Though geopolitical risks have multiplied, financial markets have remained buoyant.

Option A: This option represents both sides of the paradox – upbeat (buoyant) markets and downcast (directed downward) geopolitical conditions. Hence, Option A is the answer.

Option B: The option calls 'Russia, ISIS and China' negative forces – something not mentioned in the passage. Also, that is not a paradox. Hence, Option B is not the answer.

Option C: This is close, since geopolitical upheavals in Russia are negatively affecting its global markets, which are buoyant elsewhere. However, it is not a paradox. The paradox is not that markets are doing badly in some places and well in other places. It is that despite the risk, overall the markets are doing well. Hence, Option C is not the answer.

Option D: The inability of the financial markets, which may be true, is not the paradox. This is so because the option seems to indicate that financial markets doing well is entirely the consequence of the inability of financial markets to gauge risk. (Had they gauged risk, they wouldn't have done so well, because globally the geopolitics is risky.) There could be other reasons besides their inability (e.g. Banks taking corrective measures). So, Option D is not representing the paradox. Option D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 11 to 16: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks - the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its

neighbours and now mass protests in Hong Kong and the risk of a crackdown - have multiplied, financial markets have remained buoyant. Oil prices have been falling, and global stock markets have, overall, reached new highs. Yes, financial markets in troubled countries - for example, Russia's currency, equity and bond markets - have been negatively affected, but the more generalised contagion to global financial markets that geopolitical tensions typically engender has failed to materialise.

Why the indifference? Are investors too complacent, or is their apparent lack of concern rational, given that the actual economic and financial impact of current geopolitical risks - at least so far - has been modest?

Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.

Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. So, though sanctions and counter-sanctions between the west and Russia have increased, they are not causing significant economic and financial damage to the EU or the US.

Third, the turmoil in the Middle East has not triggered a significant shock to oil supplies and prices like those that occurred in 1973, 1979 and 1990. On the contrary, there is excess capacity in global oil markets.

Finally, the one Middle East conflict that could cause oil prices to spike - a war between Israel and Iran - is a risk that is contained, for now, by ongoing international negotiations with Iran to contain its nuclear programme.

There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind. First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US. Markets tend to disregard the risks of events whose probability is hard to assess, but those have a major impact on confidence when they do occur.

Second, markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's civil war, will not escalate or spread.

Third, geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play. Today the situation in Hong Kong, together with the news of further weakening in the Chinese economy, could trigger global financial havoc. Or the Federal Reserve could spark financial contagion by exiting zero rates sooner and faster than markets expect. Or the eurozone could relapse into recession and crisis, reviving the risk of redenomination if the monetary union breaks up. The interaction of any of these global factors with a variety of regional and local sources of geopolitical tension could be dangerously combustible.

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Q13. The reasons that the financial markets have been indifferent to geopolitical risks are

- I.
Investors are complacent because concern in the present conditions is irrational.
- II.
The expected financial impact of the current geopolitical risks is not alarming.
- III.
Long-term interest rates and policy rates are being manipulated by central banks of some countries.
- IV.
Conflicts have remained contained without causing significant financial repercussions.

a) I, III and IV

b) II and IV Your answer is correct

c) III and IV

d) I, II and III

Time spent / Accuracy Analysis

Time taken by you to answer this question	102
Avg. time spent on this question by all students	123
Difficulty Level	D
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	33.03
% of students who got the question right of those who attempted	25.66

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 582

I – The author asks whether the financial markets are indifferent because the investors are complacent. They are one and the same – financial markets being indifferent and investors being complacent – that geopolitical risks are not concerning enough. I is not a reason for the indifference. It will end up being circular reasoning. Secondly, the sentence says 'arguably their complacency is rational.' That means the concerns could also be rational. The concerns hence, cannot be called irrational either.

II - The author asks whether the complacency of the investors and the indifference of the financial markets can be called rational considering the economic impact of the risks has been modest. In other words, the expected financial impact is not big enough for investors and markets to panic and the author finds that complacency rational. Hence, II is part of the answer.

III – Consider the sentences: 'Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.' We can understand that central banks keeping rates low is a reason according to the author for the financial markets not panicking yet. But, we do not have enough evidence to believe that central banks are manipulating the rates. Hence, III is not part of the answer.

IV – Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. From this we can understand that the author feels the conflict not escalating is indeed a reason for the financial markets not showing signs of panic. Hence, IV is part of the answer.

II and IV are the answer.

Choice (B)

undefined

DIRECTIONS for questions 11 to 16: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks - the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its neighbours and now mass protests in Hong Kong and the risk of a crackdown - have multiplied, financial markets have remained buoyant. Oil prices have been falling, and global stock markets have, overall, reached new highs. Yes, financial markets in troubled countries - for example, Russia's currency, equity and bond markets - have been negatively affected, but the more generalised contagion to global financial markets that geopolitical tensions typically engender has failed to materialise.

Why the indifference? Are investors too complacent, or is their apparent lack of concern rational, given that the actual economic and financial impact of current geopolitical risks - at least so far - has been modest?

Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.

Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. So, though sanctions and counter-sanctions between the west and Russia have increased, they are not causing significant economic and financial damage to the EU or the US.

Third, the turmoil in the Middle East has not triggered a significant shock to oil supplies and prices like those that occurred in 1973, 1979 and 1990. On the contrary, there is excess capacity in global oil markets.

Finally, the one Middle East conflict that could cause oil prices to spike - a war between Israel and Iran - is a risk that is contained, for now, by ongoing international negotiations with Iran to contain its nuclear programme.

There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind. First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US. Markets tend to disregard the risks of events whose probability is hard to assess, but those have a major impact on confidence when they do occur.

Second, markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's civil war, will not escalate or spread.

Third, geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play. Today the situation in Hong Kong, together with the news of further weakening in the Chinese economy, could trigger global financial havoc. Or the Federal Reserve could spark financial contagion by exiting zero rates sooner and faster than markets expect. Or the eurozone could relapse into recession and crisis, reviving the risk of redenomination if the monetary union breaks up. The interaction of any of these global factors with a variety of regional and local sources of geopolitical tension could be dangerously combustible.

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Q14. All of the following have been mentioned as factors that could change the benign reaction of the global markets to geopolitical risks, so far, EXCEPT:

- a) Escalation of conflicts
- b) **Terrorist attacks**
- c) **Systemic factors**
- d) Oil price spikes Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	241
Avg. time spent on this question by all students	86
Difficulty Level	M
Avg. time spent on this question by students who got this question right	89
% of students who attempted this question	43.04
% of students who got the question right of those who attempted	69.02

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 582

. *There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind.* From this we can understand that the author has enumerated some reasons or scenarios.

Option A: From 'markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's civil war, will not escalate or spread' we can understand that the author suggests escalation of conflicts has been underestimated by the markets and could be a problem. Hence, Option A is not the answer.

Option B: From 'First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US', we can understand that the author feels terrorist attacks could change the situation. Hence, Option B is not the answer.

Option C: From 'geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play' we can understand that the author did suggest systemic factors could change the status quo. Hence, Option C is not the answer.

Option D: The author mentions that one of the reasons the financial markets have not really wobbled despite the geopolitical risks was because oil price spikes didn't take place. However, the author didn't mention the same while listing out scenarios that could make things go bad for financial markets. So, financial markets were steady because of the absence of oil price spikes. That does not straightaway lead us to the extrapolation that if there are spikes, it will trouble the financial markets. Hence, Option D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 11 to 16: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks - the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its neighbours and now mass protests in Hong Kong and the risk of a crackdown - have multiplied, financial markets have remained buoyant. Oil prices have been falling, and global stock markets have, overall, reached new highs. Yes, financial markets in troubled countries - for example, Russia's currency, equity and bond markets - have been negatively affected, but the more generalised contagion to global financial markets that geopolitical tensions typically engender has failed to materialise.

Why the indifference? Are investors too complacent, or is their apparent lack of concern rational, given that the actual economic and financial impact of current geopolitical risks - at least so far - has been modest?

Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.

Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. So, though sanctions and counter-sanctions between the west and Russia have increased, they are not causing significant economic and financial damage to the EU or the US.

Third, the turmoil in the Middle East has not triggered a significant shock to oil supplies and prices like those that occurred in 1973, 1979 and 1990. On the contrary, there is excess capacity in global oil markets.

Finally, the one Middle East conflict that could cause oil prices to spike - a war between Israel and Iran - is a risk that is contained, for now, by ongoing international negotiations with Iran to contain its nuclear programme.

There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind. First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US. Markets tend to disregard the risks of events whose probability is hard to assess, but those have a major impact on confidence when they do occur.

Second, markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's civil war, will not escalate or spread.

Third, geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play. Today the situation in Hong Kong, together with the news of further weakening in the Chinese economy, could trigger global financial havoc. Or the Federal Reserve could spark financial contagion by exiting zero rates sooner and faster than markets expect. Or the eurozone could relapse into recession and crisis, reviving the risk of redenomination if the monetary union breaks up. The interaction of any of these global factors with a variety of regional and local sources of geopolitical tension could be dangerously combustible.

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Q15. The First World War was mentioned in the passage to highlight the

- a) consequences of financial contagion.
- b) **erroneous pricing of low-probability, high-impact risks by markets.**
- c) **consequences of complacency in global markets.** □ **Your answer is incorrect**
- d) **risk in pricing in very low probability or high impact conflicts.**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	189
Avg. time spent on this question by all students	80
Difficulty Level	M
Avg. time spent on this question by students who got this question right	76
% of students who attempted this question	40.01
% of students who got the question right of those who attempted	51.14

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 582

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Markets were poor at correctly pricing low-probability, high-impact tail risks. Compare this sentence with – (markets) ‘ignoring the risks that led to the First World War’. Also observe, ‘financial markets priced in a very low probability that a major conflict would occur’. From these sentences, we can understand that the First World War is the major conflict and there were some risks that were ignored by the markets and those risks led to this conflict. Markets don’t price such risks well.

Option A: We are not discussing the consequences of a contagion here. Rather, we are discussing risks that could lead to a conflict/contagion. Hence, Option A is easy to eliminate as it confuses effect with cause.

Option B: The First World war was mentioned to demonstrate how the financial markets are poor at correctly pricing low-probability, high impact risks. The focus is not on the event. First World War is an example. The point highlighted here is the inability of the financial markets. Hence, Option B is the answer, as it pins the right reason – the flaw in pricing some low-probability, high impact risks.

Option C: From ‘global markets arguably have been rationally complacent’, we can understand that the author thinks there is merit in the complacency. The author calls the complacency rational, while warning that a financial contagion may not be ruled out. Now, observe the sentence structure [While X, Y] – here X and Y are two opposing events. We cannot infer though that Y is an effect of X. Causality cannot be attributed. So, we cannot really make a connection between mentioning of the First World War and complacency of the financial markets. Option C is not the answer.

Option D: The First World War was mentioned to discuss how financial markets ignore risks sometimes. The criticism is equally valid for any scenario where there are obvious risks – low-probability and high impact. This option seems to indicate risks only caused by conflicts. Also, the ‘risk’ in pricing in low probability has not been demonstrated. It has merely been highlighted that the pricing is not correct. Hence, Option D is not the answer.

Choice (B)

undefined

DIRECTIONS for questions 11 to 16: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

An increasingly obvious paradox has emerged in global financial markets this year. Though geopolitical risks - the Russia-Ukraine conflict, the rise of Islamic State and growing turmoil across the Middle East, China's territorial disputes with its neighbours and now mass protests in Hong Kong and the risk of a crackdown - have multiplied, financial markets have remained buoyant. Oil prices have been falling, and global stock markets have, overall, reached new highs. Yes, financial markets in troubled countries - for example, Russia's currency, equity and bond markets - have been negatively affected, but the more generalised contagion to global financial markets that geopolitical tensions typically engender has failed to materialise.

Why the indifference? Are investors too complacent, or is their apparent lack of concern rational, given that the actual

economic and financial impact of current geopolitical risks - at least so far - has been modest?

Global markets have not reacted for several reasons. For starters, central banks in advanced economies - the US, the eurozone, the UK and Japan - are holding policy rates near zero, and long-term interest rates have been kept low. This is boosting the prices of other risky assets such as equities and credit.

Second, markets have taken the view that the Russia-Ukraine conflict will remain contained, rather than escalate into a full-scale war. So, though sanctions and counter-sanctions between the west and Russia have increased, they are not causing significant economic and financial damage to the EU or the US.

Third, the turmoil in the Middle East has not triggered a significant shock to oil supplies and prices like those that occurred in 1973, 1979 and 1990. On the contrary, there is excess capacity in global oil markets.

Finally, the one Middle East conflict that could cause oil prices to spike - a war between Israel and Iran - is a risk that is contained, for now, by ongoing international negotiations with Iran to contain its nuclear programme.

There are good reasons why global markets so far have reacted benignly to today's geopolitical risks. What could change that? Several scenarios come to mind. First, the Middle East turmoil could affect global markets if terrorist attacks were to occur in Europe or the US. Markets tend to disregard the risks of events whose probability is hard to assess, but those have a major impact on confidence when they do occur.

Second, markets could be incorrect in their assessment that conflicts such as that between Russia and Ukraine, or Syria's civil war, will not escalate or spread.

Third, geopolitical and political tensions are more likely to trigger global contagion when a systemic factor shaping the global economy comes into play. Today the situation in Hong Kong, together with the news of further weakening in the Chinese economy, could trigger global financial havoc. Or the Federal Reserve could spark financial contagion by exiting zero rates sooner and faster than markets expect. Or the eurozone could relapse into recession and crisis, reviving the risk of redenomination if the monetary union breaks up. The interaction of any of these global factors with a variety of regional and local sources of geopolitical tension could be dangerously combustible.

So, while global markets arguably have been rationally complacent, financial contagion cannot be ruled out. A century ago, financial markets priced in a very low probability that a major conflict would occur, blissfully ignoring the risks that led to the First World War until late in the summer of 1914. Back then, markets were poor at correctly pricing low-probability, high-impact tail risks. They still are.

Q16. Which of the following can be inferred from the first para of the passage?

- a) Oil prices and stock prices are unaffected by geopolitical risks.
- b) **Growing terrorism is a geopolitical risk being ignored by the markets.**
- c) **Geopolitical tensions disturb global markets.**
- d) **Oil and stock prices are not reliable indicators of market conditions.** Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	114
Avg. time spent on this question by all students	97
Difficulty Level	M
Avg. time spent on this question by students who got this question right	98
% of students who attempted this question	39.07
% of students who got the question right of those who attempted	36.96

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 582

Option A: The author connects 'financial markets have remained buoyant' with 'Oil prices have been falling, and global stock markets have, overall, reached new highs'. So, we can understand that low oil prices and stock markets reaching highs are indicators of buoyant financial markets. Now, the author calls buoyant financial markets a paradox, given the geopolitical risks existing at the time. So, we can infer that the author expects financial markets to be affected by geopolitical risks. In other words, we can infer that oil and stock prices are affected by geopolitical risks. They are not at this point, which is the paradox, not the norm. Option A is therefore, not the answer.

Option B: Terrorism has not been discussed in the first para. It is important for the reader to not make the ISIS – terrorism connect as it has not been mentioned in the first para. Option B is not the answer.

Option C: The second sentence in the first para, after discounting the extra information between the dashes (- the Russia-Ukraine conflict...crackdown -) can be read as 'Though geopolitical risks have multiplied, financial markets have remained buoyant'. In other words, geopolitical risks usually affect the financial markets and this time around, a paradox is evident as the former is not affecting the latter. Hence, Option C is the answer.

Option D: As explained earlier, the author makes a connection between 'financial markets remaining buoyant' and 'Oil prices falling, and global stock markets reaching new highs.' That means, the author is suggesting that oil prices and stock markets are good indicators of what is happening in financial markets. Hence, Option D is not the answer.

Choice (C)

undefined

Q17. DIRECTIONS for question 17: Five sentences related to a topic are given in the question below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

1. They often learn to use "piecemeal" or "feature-by-feature" recognition strategies.
2. But because the face seems to function as an important identifying feature in memory, it can be difficult for people with this condition to keep track of information about people, and socialize normally with others.
3. Though there have been several attempts at remediation, no therapies have demonstrated lasting real-world improvements for prosopagnosics.
4. This may involve secondary clues such as clothing, gait, hair color, skin color, body shape, and voice.
5. While compensatory training utilizes strategies to work around prosopagnosics' face recognition deficits, remedial training directly targets prosopagnosics' underlying deficits (i.e. holistic face processing) to promote more normal patterns of face processing.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	82
Avg. time spent on this question by all students	127
Difficulty Level	D
Avg. time spent on this question by students who got this question right	127
% of students who attempted this question	37.56
% of students who got the question right of those who attempted	7.16

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Sentence 1: An independent sentence that talks about (face) recognition strategies.
Sentence 2: There is a contrast conjunction 'but' in this sentence and the sentence is negative in tone (difficult for people)
Sentence 3: An independent sentence that talks about therapies for prosopagnosia.
Sentence 4: The demonstrative pronoun 'this' indicates that another sentence has to be placed prior to this sentence.
Sentence 5: A "solution to the problem" sentence that is positive in tone.
Sentence 3 is a general sentence that begins the para. It establishes the topic of discussion: no therapies have demonstrated lasting real-world improvements. Sentence 3 is followed by sentence 1. "several attempts at remediation" in sentence 3 is parallel to the problem that Prosopagnosics face: they use "piecemeal" or "feature-by-feature" recognition strategies.
Sentences 1 and 4 form a logical block. "This may involve secondary clues such as clothing, gait, hair color" in sentence 4 links with "it can be difficult for people with this condition to keep track of information about people" in sentence 2. So sentence 2 follows sentence 4. So, 3142. Sentence 2 mirrors the introduction. "But because the face seems to function as an important identifying feature in memory" in sentence 2 links with "Though there have been several attempts at remediation" in sentence 3.
Sentence 5 is the odd sentence out. "it can be difficult for people with this condition and "no therapies have demonstrated lasting real-world improvements" in sentences 2 and 3 respectively do not gel with the overall positive tone of sentence 5. Sentence 5 can be placed much later in the thought flow.

Ans: (5)

undefined

Q18. DIRECTIONS for question 18: The paragraph given below is followed by four alternative summaries. Choose the option that best captures the philosopher's position.

Perhaps Sartre's best-known philosophical point is "existence precedes essence". In the case of non-human entities, an essence is something that is prior to something's actual existence. A table's essence is the intention that its creator, builder or user has for it, such as its general shape, components and functions. A woodchuck's essence is in its genetic inheritance, its instincts and the conditions of its environment - and its entire life is sort of the playing out of a program. But a human being, according to Sartre, doesn't have a true essence. Oh, sure, we have our general shape, our genetics, our upbringing and alike. But they do not determine our lives, they only set the stage. It is we ourselves who shape our lives.

- a) Existence is essence personified in the case of non-human entities but without an essence to provide direction, human consciousness is meaningless.
- b) **Essence precedes existence in the case of non-human entities while in the case of humans, true essence is triggered only by the environment to which they are exposed.**
- c) **The true essence of a non-human entity precedes its existence but in humans, essence succeeds existence as they choose what to do with their lives.**
- d) **Genetic inheritance plays a major role in determining the essence of the existence of animals, but in the case of humans, the environment plays a key role and our essence is clear when our whole life is done.**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	212
Avg. time spent on this question by all students	138
Difficulty Level	D
Avg. time spent on this question by students who got this question right	134
% of students who attempted this question	26.43
% of students who got the question right of those who attempted	80.15

[Video Solution](#)

[Text Solution](#)

Option A: The para talks about essence preceding existence in the case of non-human entities. So "Existence is essence personified" in the first part of choice A is incorrect. The second part of choice A is out of scope.

Option B: The word 'only' in the second part of choice B makes it extreme. The para clearly tells us that a human being doesn't have a true essence. So "true essence is triggered only by the environment to which the humans are exposed" is not a precise way of summarizing the contents of the para. Choice B is not the correct answer.

Option C: Choice C is an apt summary of the para.

Option D: Choice D repeats the example of the woodchuck but the point made while citing the example of the woodchuck is far-fetched. Also "essence is clear when our whole life is done" cannot be inferred from the para.

Choice (C)

undefined

DIRECTIONS for questions 19 to 23: The passage given below is accompanied by a set of five questions. Choose the best answer to each question.

In one sense, there's less mystery in mathematics than there is in any other human endeavour. In math, we can really understand things, in a deeper way than we ever understand anything else. So how is it that many people, notably including mathematicians, feel that there's something 'mysterious' about this least mysterious of subjects? What do they mean? Let us take the example of π . No one has proved that, as you go further out in the decimal digits of π , the digits 0 through 9 occur with equal frequency.

Yet, for reasons that apply to many other unsolved mathematical problems, it's debatable whether to call this a 'mystery'. What would really be mysterious, one wants to say, would be if the digits didn't occur with equal frequency! The whole challenge is to give airtight proof that what does happen is what anyone with common sense, after thinking the matter over for a bit, would conclude almost certainly must happen. As Jordan Ellenberg wrote, a dirty secret in mathematics is that many unsolved problems have a similar flavour: they're less about mysterious coincidences than about the lack of them.

Take, for example, the Twin Primes Conjecture, which holds that there are infinitely many pairs of prime numbers separated by 2 (such as 3 and 5, or 11 and 13). Ellenberg explains that, for this conjecture to be true, there doesn't need to be any mysterious 'force' pulling primes together; there just needs not to be a mysterious force pushing them apart. Or take the Riemann Hypothesis, which states that the infinitely many non-trivial roots of a certain complex function all lie on a single line. When it's stated that way, the hypothesis does sound like a mystery. Why should infinitely many numbers all happen to line up like that?

The mystery lessens once you realise that each zero of this function encodes global information about the distribution of prime numbers - and a single zero off the line would represent infinitely many prime numbers clumping together in astronomically improbable-seeming ways. So one mysterious pattern has to be there to prevent a second pattern that would be even more mysterious. Granted, not all mathematical mysteries have the character of rigorously proving what common sense would predict.

In 1978, John McKay noticed that the number 196,883 showed up in two completely unrelated-seeming parts of math. Surely it was just a coincidence? In 1998, Richard Borcherds won the Fields Medal largely for proving that, no, it wasn't.

Math, you might say, is a conspiracy theorist's dream: it's the one part of life where, when you see things match up, the odds are excellent that it's not just a coincidence, that there is a deep explanation waiting to be unearthed. On the other hand, precisely because the entire subject is shot through with non-coincidental patterns, once you've spent enough time doing

math, you might stop being so surprised by them. You might come to see them as just part of the terrain.

So maybe the right question is: after a mathematical pattern has been explained - not only proved but really exhaustively understood, like the Pythagorean Theorem - is there still a residual mystery about it? I would say that there is, but it takes some effort to put our finger on it.

Q19. Which of the following statements can be inferred to be true from the passage?

- a) John McKay observed that the number 196,883 showed up in two unrelated parts of math while Richard Borcherds proved that it did not show up.
- b) **John McKay came up with an explanation for the number 196,883 showing up in two unrelated parts of math, while Richard Borcherds observed that it was mere coincidence.**
- c) **John McKay observed that there can be no explanation for the number 196,883 showing up in two unrelated-seeming parts of math while Richard Borcherds observed that there was, indeed, an explanation.**
- d) **John McKay observed that the number 196,883 showed up in two unrelated parts of math while Richard Borcherds came up with an explanation for the same.** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	157
Avg. time spent on this question by all students	280
Difficulty Level	D
Avg. time spent on this question by students who got this question right	280
% of students who attempted this question	41.6
% of students who got the question right of those who attempted	51.69

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 546

In 1978, John McKay noticed that the number 196,883 showed up in two completely unrelated-seeming parts of math. Surely it was just a coincidence? In 1998, Richard Borcherds won the Fields Medal largely for proving that, no, it wasn't.

Choice (A): Richard Borcherds proved that the number 196,833 showing up in two unrelated parts of math was not a coincidence. The second part of this option states that he observed that it did not show up in two unrelated parts of math. This is false. Therefore, even though the first part of this choice is true, the second part is not true. Hence, this is not the answer.

Choice (B): John McKay only observed that the number 196,833 showed up in two unrelated parts of math and there is nothing in the passage that throws light on whether he was able to come up with an explanation for the same. Also, Richard Borcherds proved that it was not a coincidence. Hence, this is not the answer.

Choice (C): John McKay only observed that the number 196,833 showed up in two unrelated parts of math and there is nothing in the passage that throws light on whether he was able to come up with an explanation for the same. Hence, this cannot be inferred to be true. Hence, this is not the answer.

Choice (D): John McKay did observe that the number 196,883 showed up in two unrelated parts of math. From "Richard Borcherds won the Fields Medal largely for proving that, no, it wasn't", it can be inferred that Richard Borcherds did observe that there was an explanation for the same. Therefore, this can be inferred to be true.

Choice (D)

undefined

DIRECTIONS for questions 19 to 23: The passage given below is accompanied by a set of five questions. Choose the best answer to each question.

In one sense, there's less mystery in mathematics than there is in any other human endeavour. In math, we can really understand things, in a deeper way than we ever understand anything else. So how is it that many people, notably including mathematicians, feel that there's something 'mysterious' about this least mysterious of subjects? What do they mean? Let us take the example of π . No one has proved that, as you go further out in the decimal digits of π , the digits 0 through 9 occur with equal frequency.

Yet, for reasons that apply to many other unsolved mathematical problems, it's debatable whether to call this a 'mystery'. What would really be mysterious, one wants to say, would be if the digits didn't occur with equal frequency! The whole challenge is to give airtight proof that what does happen is what anyone with common sense, after thinking the matter over for a bit, would conclude almost certainly must happen. As Jordan Ellenberg wrote, a dirty secret in mathematics is that many unsolved problems have a similar flavour: they're less about mysterious coincidences than about the lack of them.

Take, for example, the Twin Primes Conjecture, which holds that there are infinitely many pairs of prime numbers separated by 2 (such as 3 and 5, or 11 and 13). Ellenberg explains that, for this conjecture to be true, there doesn't need to be any mysterious 'force' pulling primes together; there just needs not to be a mysterious force pushing them apart. Or take the Riemann Hypothesis, which states that the infinitely many non-trivial roots of a certain complex function all lie on a single line. When it's stated that way, the hypothesis does sound like a mystery. Why should infinitely many numbers all happen to line up like that?

The mystery lessens once you realise that each zero of this function encodes global information about the distribution of prime numbers - and a single zero off the line would represent infinitely many prime numbers clumping together in astronomically improbable-seeming ways. So one mysterious pattern has to be there to prevent a second pattern that would be even more mysterious. Granted, not all mathematical mysteries have the character of rigorously proving what common sense would predict.

In 1978, John McKay noticed that the number 196,883 showed up in two completely unrelated-seeming parts of math. Surely it was just a coincidence? In 1998, Richard Borcherds won the Fields Medal largely for proving that, no, it wasn't.

Math, you might say, is a conspiracy theorist's dream: it's the one part of life where, when you see things match up, the odds are excellent that it's not just a coincidence, that there is a deep explanation waiting to be unearthed. On the other hand, precisely because the entire subject is shot through with non-coincidental patterns, once you've spent enough time doing math, you might stop being so surprised by them. You might come to see them as just part of the terrain.

So maybe the right question is: after a mathematical pattern has been explained - not only proved but really exhaustively understood, like the Pythagorean Theorem - is there still a residual mystery about it? I would say that there is, but it takes some effort to put our finger on it.

Q20. Who among the following would best fit the description of a conspiracy theorist, according to the author?

- a) Someone who believes that every explanation that gets unearthed addresses a coincidence.
- b) **Someone who believes that coincidences have possible explanations.**
- c) **Someone who believes that it is highly unlikely for things to match up.** Your answer is incorrect
- d) **Someone who attaches great significance even for things that are not of much significance.**

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	137
Avg. time spent on this question by all students	117
Difficulty Level	D
Avg. time spent on this question by students who got this question right	113
% of students who attempted this question	36.67
% of students who got the question right of those who attempted	74.64

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 546

Math, you might say, is a conspiracy theorist's dream: it's the one part of life where, when you see things match up, the odds are excellent that it's not just a coincidence, that there is a deep explanation waiting to be unearthed. From this, it can be inferred that a conspiracy theorist is someone who believes that, when things start adding up, there is an explanation, albeit unknown, for something deemed coincidental.

Choice (A): A conspiracy theorist is not someone who believes that every explanation that gets unearthed addresses a coincidence. In fact, it is the other way around. A conspiracy theorist believes that every coincidence has an explanation, albeit probably not unearthed yet. Hence, this is not the answer.

Choice (B): It can be inferred from the author's statement "Math, as you might, say....", that a conspiracy theorist is someone who believes that, when things start adding up, there is an explanation, albeit unknown, for something deemed coincidental. So a conspiracy theorist would believe that certain things that are deemed coincidental need not be coincidental. Hence, this is the answer.

Choice (C): A conspiracy theorist is not someone who believes that it is highly unlikely for things to match up. A conspiracy theorist believes that there is an explanation for things that match up. Hence, this is not the answer.

Choice (D): This may be close to the right answer when one equates things that are not of much significance to coincidences. But attaching great significance need not necessarily allude to the explanation behind those coincidences. Also, the author mentions "conspiracy theorist" in the context of coincidences and this choice may not be restricted to coincidences alone. Hence, this is not the answer.

Choice (B)

undefined

DIRECTIONS for questions 19 to 23: The passage given below is accompanied by a set of five questions. Choose the best answer to each question.

In one sense, there's less mystery in mathematics than there is in any other human endeavour. In math, we can really understand things, in a deeper way than we ever understand anything else. So how is it that many people, notably including mathematicians, feel that there's something 'mysterious' about this least mysterious of subjects? What do they mean? Let us take the example of π . No one has proved that, as you go further out in the decimal digits of π , the digits 0 through 9 occur with equal frequency.

Yet, for reasons that apply to many other unsolved mathematical problems, it's debatable whether to call this a 'mystery'. What would really be mysterious, one wants to say, would be if the digits didn't occur with equal frequency! The whole challenge is to give airtight proof that what does happen is what anyone with common sense, after thinking the matter over for a bit, would conclude almost certainly must happen. As Jordan Ellenberg wrote, a dirty secret in mathematics is that many unsolved problems have a similar flavour: they're less about mysterious coincidences than about the lack of them.

Take, for example, the Twin Primes Conjecture, which holds that there are infinitely many pairs of prime numbers separated by 2 (such as 3 and 5, or 11 and 13). Ellenberg explains that, for this conjecture to be true, there doesn't need to be any mysterious 'force' pulling primes together; there just needs not to be a mysterious force pushing them apart. Or take the Riemann Hypothesis, which states that the infinitely many non-trivial roots of a certain complex function all lie on a single line. When it's stated that way, the hypothesis does sound like a mystery. Why should infinitely many numbers all happen to line up like that?

The mystery lessens once you realise that each zero of this function encodes global information about the distribution of prime numbers - and a single zero off the line would represent infinitely many prime numbers clumping together in astronomically improbable-seeming ways. So one mysterious pattern has to be there to prevent a second pattern that would be even more mysterious. Granted, not all mathematical mysteries have the character of rigorously proving what common sense would predict.

In 1978, John McKay noticed that the number 196,883 showed up in two completely unrelated-seeming parts of math. Surely it was just a coincidence? In 1998, Richard Borcherds won the Fields Medal largely for proving that, no, it wasn't.

Math, you might say, is a conspiracy theorist's dream: it's the one part of life where, when you see things match up, the odds

are excellent that it's not just a coincidence, that there is a deep explanation waiting to be unearthed. On the other hand, precisely because the entire subject is shot through with non-coincidental patterns, once you've spent enough time doing math, you might stop being so surprised by them. You might come to see them as just part of the terrain.

So maybe the right question is: after a mathematical pattern has been explained - not only proved but really exhaustively understood, like the Pythagorean Theorem - is there still a residual mystery about it? I would say that there is, but it takes some effort to put our finger on it.

Q21. The author mentions the Pythagorean Theorem

- a) to point out that there exists a well-defined proof for this theorem.
- b) **to highlight that there is still a residual mystery around this theorem even though it was proved.**
- c) **to emphasize that it is difficult to identify the mystery behind this theorem.**
- d) **as an example of a mathematical concept which is comprehensively understood.** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	78
Avg. time spent on this question by all students	84
Difficulty Level	M
Avg. time spent on this question by students who got this question right	79
% of students who attempted this question	44.46
% of students who got the question right of those who attempted	32.56

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 546

So maybe the right question is: after a mathematical pattern has been explained – not only proved but really exhaustively understood, like the Pythagorean Theorem – is there still a residual mystery about it? I would say that there is, but it takes some effort to put our finger on it.

Choice (A): The author has not talked about any proof for this theorem and has only stated that it has been exhaustively understood. Hence, this is not the answer.

Choice (B): The author has mentioned Pythagorean theorem as an example of a theorem that has been exhaustively understood and even though that question has been asked, it cannot be inferred that there is a residual mystery around this theorem. Hence, this is not the answer.

Choice (C): The author states that this theory has been exhaustively understood and does not allude to any mystery around this theorem. Hence, this is not the answer.

Choice (D): From "not only proved but really exhaustively understood, like the Pythagorean Theorem", it can be inferred that the author mentions Pythagorean Theorem as an example of a mathematical pattern that has been comprehensively understood. Hence, this is the answer.

Choice (D)

undefined

DIRECTIONS for questions 19 to 23: The passage given below is accompanied by a set of five questions. Choose the best answer to each question.

In one sense, there's less mystery in mathematics than there is in any other human endeavour. In math, we can really understand things, in a deeper way than we ever understand anything else. So how is it that many people, notably including mathematicians, feel that there's something 'mysterious' about this least mysterious of subjects? What do they mean? Let us take the example of π . No one has proved that, as you go further out in the decimal digits of π , the digits 0 through 9 occur with equal frequency.

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Q22. What can be inferred from Jordan Ellenberg's statement, "a dirty secret in mathematics... lack of them"?

- a) Mathematical problems that are mysterious outnumber those that aren't mysterious.
- b) **Many unsolved mathematical problems are mysterious due to a lack of mysterious coincidences.**
- c) **Mathematics is more about a lack of mysterious coincidences than it is about their presence.** Your answer is incorrect
- d) **None of the above**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	14
Avg. time spent on this question by all students	111
Difficulty Level	D
Avg. time spent on this question by students who got this question right	120
% of students who attempted this question	34.94
% of students who got the question right of those who attempted	22.45

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 546

Jordan Ellenberg wrote that a *dirty secret in mathematics is that many unsolved problems have a similar flavour: they're less about mysterious coincidences than about the lack of them.* This statement only reaffirms the author's opinion that Math is not as mysterious as it is thought to be. There ought to be mysterious coincidences associated with most of the unsolved mathematical problems but there are not as many as one would expect.

Choice (A): Jordan Ellenberg's statement does not consider mathematical problems that are not deemed mysterious at all. So it cannot be inferred if the mysterious problems outnumber the non-mysterious problems. Hence, this is not the answer.

Choice (B): Jordan Ellenberg's statement does not state that the mystery surrounding certain mathematical problems is because of a lack of mysterious coincidences. Unlike mentioned in this choice, a lack of mysterious coincidences does not cause problems to be mysterious or the other way around. Hence, this is not the answer.

Choice (C): Jordan Ellenberg's statement is concerned with the many unsolved problems in mathematics and not mathematics as a whole. This choice is more generic and Jordan's statement may not necessarily include every single mathematical problem. Hence, this is not the answer.

Hence, Choice (D) is the answer.

Choice (D)

undefined

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- b) Many unsolved mathematical problems are mysterious due to a lack of mysterious coincidences.
- c) Mathematics is more about a lack of mysterious coincidences than it is about their presence. □ Your answer is incorrect
- d) None of the above

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	14
Avg. time spent on this question by all students	111
Difficulty Level	D
Avg. time spent on this question by students who got this question right	120
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[Video Solution](#)

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Q23. The author gives the example of ' π ' in the first two paras in order to

- a) point out that there are certain unsolved problems that no one can prove or disprove despite years of effort.
- b) emphasize that many unsolved mathematical problems are not as mysterious as they are deemed to be. □
Your answer is correct
- c) illustrate the idea that it is pointless to debate over unsolved mathematical problems.
- d) establish that mathematics is the least mysterious of subjects even though mathematicians believe otherwise.

Time spent / Accuracy Analysis

Time taken by you to answer this question	372
Avg. time spent on this question by all students	114
Difficulty Level	D
Avg. time spent on this question by students who got this question right	115
% of students who attempted this question	36.77
% of students who got the question right of those who attempted	47.09

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 546

Let us take the example of π , no one has proved that, as you go further out in the decimal digits of π , the digits 0 through 9 occur with equal frequency. Yet, for reasons that apply to many other unsolved mathematical problems, it's debatable whether to call this a 'mystery'. What would really be mysterious, one wants to say, would be if the digits didn't occur with equal frequency.

Choice (A): Although the author has stated that no one has been able to prove the 'mystery' involving π , it is not in the context of unsolved problems being proved or disproved as stated in this option. It is in the context of the 'mystery' in the case of such problems. The author opines that Math is the least mysterious of subjects and then quotes the example of π to state that the mystery around π is not as mysterious as it is made out to be. Hence, this is not the answer.

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Choice (C): The author does not talk about the usefulness or the pointlessness of the debate over unsolved mathematical problems. Hence, this is not the answer.

Choice (D): This may look like the answer because the author's statement that mathematics is the least mysterious of subjects precedes the example of π . However, the example of π was mentioned as an example of how some problems can appear like mysteries to some mathematicians. He does not use this example to establish that mathematics is the **least mysterious** of all subjects as this has already been established.

Choice (B)

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- b) emphasize that many unsolved mathematical problems are not as mysterious as they are deemed to be. □
Your answer is correct
- c) illustrate the idea that it is pointless to debate over unsolved mathematical problems.
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Time spent / Accuracy Analysis

Time taken by you to answer this question	372
Avg. time spent on this question by all students	114
Difficulty Level	D
Avg. time spent on this question by students who got this question right	115
% of students who attempted this question	36.77
% of students who got the question right of those who attempted	47.09

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 546

Let us take the example of π , no one has proved that, as you go further out in the decimal digits of π , the digits 0 through 9 occur with equal frequency. Yet, for reasons that apply to many other unsolved mathematical problems, it's debatable whether to call this a 'mystery'. What would really be mysterious, one wants to say, would be if the digits didn't occur with equal frequency.

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Choice (B)

undefined

Q24. DIRECTIONS for question 24: Five sentences related to a topic are given in the question below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

1. Whether it was to explore the light-quantum hypothesis or to look at scattering of a gas, it seems as though radiation was never too far from his mind.
2. The refractive index of a gas depends on its density, something formally known as the Gladstone-Dale law.
3. Smoluchowski had some experiments to back him up: Richard Avenarius had shown, in 1874, that there was a strong scattering by a gas close to its critical point and he named this phenomenon 'critical opalescence'.
4. Smolan Smoluchowski thought that density fluctuations caused fluctuations in the refractive index of the gas, so, at the critical point, there would be huge scattering of light by the gas.
5. John Tyndall, in 1869, had similarly suggested that water droplets in the atmosphere scatter light, causing the colour of the sky to be blue; and dust particles also scatter light, causing the trail of smoke from a cigarette to be blue and the sunsets in polluted skies, a glorious red.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	123
Avg. time spent on this question by all students	118
Difficulty Level	D
Avg. time spent on this question by students who got this question right	124
% of students who attempted this question	36.01
% of students who got the question right of those who attempted	36.39

[Video Solution](#)

[Text Solution](#)

Sentence 1: A stand-alone sentence which has an opinion about a person (it seems as though).

Sentence 2: Sentence 2 is an independent sentence which explains the Gladstone-Dale law. There is a reference to 'density' as a factor which determines the refractive index of a gas.

Sentence 3: The sentence has the clue "other experiments to back him up". A phenomenon called 'critical opalescence' is explained.

Sentence 4: Sentence 4 is again an independent sentence that has a reference to "density fluctuations caused fluctuations in the refractive index of the gas". Note that sentence 4 has the full name: Smolan Smoluchowski.

Sentence 5: The view of John Tyndall or his experimental finding has been mentioned here.

So, Sentence 2 which explains the 'Gladstone-Dale law' is the opening sentence of the para.

Sentences 2 and 4 form a logical block. "refractive index of a gas depends on its density" in sentence 2 links with "density fluctuations caused fluctuations in the refractive index of the gas" in sentence 4.

Sentence 4 is followed by sentence 3. "Smolan Smoluchowski thought that density fluctuations caused fluctuations at the critical point, there would be huge scattering of light by the gas" in sentence 4 links with "some experiments to back him up" in sentence 3.

Sentences 3 and 5 form another logical block. "some experiments to back him up" in sentence 3 link with the (similar) suggestions of John Tyndall in sentence 5. "water droplets in the atmosphere scatter light, causing and dust particles also scatter light, causing" in sentence 5 link with "there would be huge scattering of light by the gas" mentioned earlier in sentence 4. So, 2435.

Sentence 1 is the odd sentence out. "it seems as though radiation was never too far from his mind" in sentence 1 is not specifically related to the remaining sentences. 'radiation' is another topic of investigation. Sentence 1 needs a precedent and more substantiation and it can be a part of another para.

Ans: (1)

undefined

Q25. DIRECTIONS for question 25: The sentences given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the five sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. When asked to judge how good the players were, the group considered the players in the well-lighted gym to be superior.
2. Psychologists call this tendency the Fundamental Attribution Error - when it comes to interpreting other people's behaviour, human beings invariably make the mistake of overestimating the importance of fundamental character traits and underestimating the importance of the situation and context.

3. The mistake we make in thinking of character as something unified and all-encompassing is very similar to a kind of blind spot in the way we process information.
4. In one experiment, for instance, a group of people are told to watch two sets of similarly talented basketball players, the first of whom are shooting baskets in a well-lighted gym, and the second, in a badly lighted gym, missing a lot of shots.
5. That is, people will always reach for a “dispositional” explanation for events, as opposed to a contextual explanation.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	50
Avg. time spent on this question by all students	133
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	133
% of students who attempted this question	24.99
% of students who got the question right of those who attempted	15.04

[Video Solution](#)

[Text Solution](#)

Sentence 1: Sentence 1 highlights a result or finding.

Sentence 2: The demonstrative adjective 'this' in sentence 2 indicates that there must be a referent in another sentence. The Fundamental Attribution Error is explained here.

Sentence 3: A general and standalone sentence that can begin the para.

Sentence 4: Sentence 4 provides an instance or experimental procedure.

Sentence 5: "That is" in the beginning of sentence 5 indicates that sentence 5 follows another sentence.

So sentence 3 is a general sentence that can begin the para. It highlights a mistake.

Sentences 3 and 2 form a logical block. "this tendency" in sentence 2 points to "The mistake we make in thinking of character as something unified and all-encompassing" as given in sentence 3. "The mistake we make in thinking of character" in sentence 3 links with "when it comes to interpreting other people's behaviour" in sentence 2. So sentence 2 follows sentence 3.

Sentences 2 and 5 form another logical block. "overestimating the importance of fundamental character traits" in sentence 2 links with "reach for a “dispositional” explanation for events" in sentence 5. Also, "underestimating the importance of the situation and context" in sentence 2 links with "opposed to a contextual explanation" in sentence 5. So, 325.

Sentence 5 is followed by sentence 4. Sentence 4 (for instance) exemplifies the point made in sentences 2 and 5. "shooting baskets in a badly lighted gym, missing a lot of shots" in sentence 4 points to "contextual explanation" in sentence 5.

Sentence 4 is followed by sentence 1. "the group considered the players in the well-lighted gym to be superior" in sentence 1 is an observation that links with "reach for a “dispositional” explanation for events, as opposed to a contextual explanation" as given earlier in sentence 5. So, 32541.

Ans: (32541)

undefined

DIRECTIONS for questions 26 to 29: The passage given below is accompanied by a set of four questions. Choose the best answer to each question.

A new government decree in France is forcing manufacturers to tell consumers how long their appliances will last. French companies will also have to inform consumers how long spare parts for the product will be available, or risk a fine. And if this

wasn't enough, from next year faulty products - whether it's mobile phones to washing machines - will have to be repaired or replaced for free within two years of being purchased.

The French government hopes this will help to combat "planned obsolescence" - the practice of designing products with restricted life spans to ensure consumers will buy more.

It's hardly a new idea. In the 1920s, the Phoebus cartel had the bright idea to create bulbs that would break after 1,000 hours instead of providing the 1,500-2,000 hours that previous bulbs managed. Before the advent of "fast fashion" - planned obsolescence in action - it was the basis for *The Man in the White Suit*, a 1951 Ealing comedy starring Alec Guinness as an inventor who makes a dirt-repelling everlasting fibre, and promptly finds himself a target for trade unionists and mill owners who fear he will destroy the textile business with one perfect product.

Today, it's hard not to become paranoid when you start thinking about the appliances we use. As with various laptops and the sleekest mobile phones, they are sealed in, so when the battery dies it's easier to chuck the whole thing away than try to repair it.

Manufacturers say there are valid reasons for all of this. Sealed batteries, for instance, make for a thinner product than one that can be upgraded or fixed, while tamper-proof screws can be safer.

But Janet Gunter from Restart, a charity that aims to get people fixing and tinkering again, says bad design, or cheap materials, can also be blamed for limited lifespans. "Things are not designed to be taken apart anymore." She points out that some new phones don't have removable batteries or that memory chips on tablets and phones are soldered on to circuit boards: you can't upgrade them easily, so once they run out or fill up, you're stuck. Will French law make planned obsolescence obsolete?

Q26. Which of the following, if true, weakens the argument that products with restricted life spans make consumers buy more?

- a) Customers generally stick to one brand for all their appliances.
- b) **Customers do not switch brands despite their appliances not giving them long returns.**
- c) **Brands that offer the cheapest products register the most sales.**
- d) **Customers stop using appliances which do not give them expected longevity.** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	249
Avg. time spent on this question by all students	202
Difficulty Level	M
Avg. time spent on this question by students who got this question right	197
% of students who attempted this question	40.08
% of students who got the question right of those who attempted	82.55

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 358

Planned obsolescence can benefit companies if they know customers will come back to buy one more appliance once the existing one starts malfunctioning.

Option A: Assuming a customer needs the appliance, he or she will continue to buy it from the same brand or a different one. Choice A neither strengthens nor weakens the argument because whether the customer sticks to a brand or not doesn't really throw any light on the argument that deliberately planning obsolescence will make customer buy more (more from the same company or from any company hasn't been discussed). Hence, this will not weaken the planned obsolescence argument. Option A is not the answer.

Option B: Once again this argument is not relevant for the relationship between companies deliberately indulging in planned obsolescence to make customers buy more (since customer loyalty as a factor is not important here). Hence, this will not weaken the planned obsolescence argument. Option B is not the answer.

Option C: If this were true, then companies are more likely to cut corners to lower rates rather than to provide customers the best. That will not weaken the planned obsolescence argument as there is a direct correlation between intentions of the companies and the customers buying more. Option C is not the answer.

Option D: If this were true, planned obsolescence would become counter-productive as it doesn't make customers buy more, and turns them away completely from the product. Hence, Option D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 26 to 29: The passage given below is accompanied by a set of four questions. Choose the best answer to each question.

A new government decree in France is forcing manufacturers to tell consumers how long their appliances will last. French companies will also have to inform consumers how long spare parts for the product will be available, or risk a fine. And if this wasn't enough, from next year faulty products - whether it's mobile phones to washing machines - will have to be repaired or replaced for free within two years of being purchased.

The French government hopes this will help to combat "planned obsolescence" - the practice of designing products with restricted life spans to ensure consumers will buy more.

It's hardly a new idea. In the 1920s, the Phoebus cartel had the bright idea to create bulbs that would break after 1,000 hours instead of providing the 1,500-2,000 hours that previous bulbs managed. Before the advent of "fast fashion" - planned obsolescence in action - it was the basis for The Man in the White Suit, a 1951 Ealing comedy starring Alec Guinness as an inventor who makes a dirt-repelling everlasting fibre, and promptly finds himself a target for trade unionists and mill owners who fear he will destroy the textile business with one perfect product.

Today, it's hard not to become paranoid when you start thinking about the appliances we use. As with various laptops and the sleekest mobile phones, they are sealed in, so when the battery dies it's easier to chuck the whole thing away than try to repair it.

Manufacturers say there are valid reasons for all of this. Sealed batteries, for instance, make for a thinner product than one that can be upgraded or fixed, while tamper-proof screws can be safer.

But Janet Gunter from Restart, a charity that aims to get people fixing and tinkering again, says bad design, or cheap materials, can also be blamed for limited lifespans. "Things are not designed to be taken apart anymore." She points out that some new phones don't have removable batteries or that memory chips on tablets and phones are soldered on to circuit boards: you can't upgrade them easily, so once they run out or fill up, you're stuck. Will French law make planned obsolescence obsolete?

Q27. Which of the following is not mentioned in the passage as an example of 'planned obsolescence'?

- a) Use of tamper-proof screws Your answer is correct
- b) Bulbs manufactured to break after 1000 hours
- c) Use of sealed batteries in phones
- d) Memory chips soldered on to the circuit boards of phones

Time spent / Accuracy Analysis

Time taken by you to answer this question	175
Avg. time spent on this question by all students	102
Difficulty Level	M
Avg. time spent on this question by students who got this question right	99
% of students who attempted this question	43.99
% of students who got the question right of those who attempted	68.79

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 358

From the passage: "planned obsolescence" – the practice of designing products with restricted life spans to ensure consumers will buy more. Several such examples have been mentioned.

Option A: The passage mentions tamper-proof screws only as part of the manufacturers' argument, as an example of there being a valid reason for using tamper-proof screws. Even though the passage talks about sealed appliances, it does not mention tamper-proof screws as a way of 'sealing in' the appliances. Hence, this is the correct answer.

Option B: From 'the Phoebus cartel had the bright idea to create bulbs that would break after 1,000 hours instead of providing the 1,500-2,000 hours' that previous bulbs managed', we can understand that bulbs manufactured to break after 1000 hours has been mentioned as an example of planned obsolescence. Hence, Option B is not the answer.

Option C: From 'As with various laptops and the sleekest mobile phones, they are sealed in, so when the battery dies it's easier to chuck the whole thing away than try to repair it', we can understand that sealed batteries which cannot be repaired are examples of 'planned obsolescence'. Hence, Option C is not the answer.

Option D: From 'or that memory chips on tablets and phones are soldered on to circuit boards: you can't upgrade them easily, so once they run out or fill up, you're stuck', we can understand that memory chips are soldered on to the circuit boards to prevent upgrade. This is an example of planned obsolescence. Hence, Option D is not the answer.

Choice (A)

undefined

DIRECTIONS for questions 26 to 29: The passage given below is accompanied by a set of four questions. Choose the best answer to each question.

A new government decree in France is forcing manufacturers to tell consumers how long their appliances will last. French companies will also have to inform consumers how long spare parts for the product will be available, or risk a fine. And if this wasn't enough, from next year faulty products - whether it's mobile phones to washing machines - will have to be repaired or replaced for free within two years of being purchased.

The French government hopes this will help to combat "planned obsolescence" - the practice of designing products with restricted life spans to ensure consumers will buy more.

It's hardly a new idea. In the 1920s, the Phoebus cartel had the bright idea to create bulbs that would break after 1,000 hours instead of providing the 1,500-2,000 hours that previous bulbs managed. Before the advent of "fast fashion" - planned obsolescence in action - it was the basis for *The Man in the White Suit*, a 1951 Ealing comedy starring Alec Guinness as an inventor who makes a dirt-repelling everlasting fibre, and promptly finds himself a target for trade unionists and mill owners who fear he will destroy the textile business with one perfect product.

Today, it's hard not to become paranoid when you start thinking about the appliances we use. As with various laptops and the sleekest mobile phones, they are sealed in, so when the battery dies it's easier to chuck the whole thing away than try to repair it.

Manufacturers say there are valid reasons for all of this. Sealed batteries, for instance, make for a thinner product than one that can be upgraded or fixed, while tamper-proof screws can be safer.

But Janet Gunter from Restart, a charity that aims to get people fixing and tinkering again, says bad design, or cheap materials, can also be blamed for limited lifespans. "Things are not designed to be taken apart anymore." She points out that some new phones don't have removable batteries or that memory chips on tablets and phones are soldered on to circuit boards: you can't upgrade them easily, so once they run out or fill up, you're stuck. Will French law make planned obsolescence obsolete?

Q28. The Man in the White Suit was mentioned

- a) to acknowledge the possibility of creating a dirt-repelling everlasting fibre.
- b) to show how a perfect product can destroy an industry.
- c) to announce the advent of 'fast fashion'.
- d) to reiterate the idea that planned obsolescence is not a recent phenomenon. Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	199
Avg. time spent on this question by all students	83
Difficulty Level	M
Avg. time spent on this question by students who got this question right	78
% of students who attempted this question	41.6
% of students who got the question right of those who attempted	61.4

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 358

It's hardly a new idea. In the 1920s, the Phoebus cartel had the bright idea to create bulbs that would break after 1,000 hours instead of providing the 1,500-2,000 hours that previous bulbs managed. Before the advent of "fast fashion" – planned obsolescence in action – it was the basis for The Man in the White Suit. From the sentences, we can understand that the Phoebus Cartel's idea to create 1000-hour bulbs was the basis of The Man in the White Suit. That's because it was supposed to be before the advent of 'fast fashion' which has been described as planned obsolescence in action.

Option A: The story was not about its literal significance. It was not given as an example of the planned obsolescence in the textile industry. It was more a representation of such a strategy. Hence, Option A is not the answer.

Option B: The story was about how creating the perfect fabric would destroy the textile industry. That cannot be extrapolated to all products and industries. Hence, Option B is not the answer.

Option C: The movie could not have been made to announce the advent of 'fast fashion' since we haven't been told when the movie was really released. All we were told in the passage was that the story was before the advent of 'fast fashion'. We don't have enough evidence to make this connection. Hence, Option C is not the answer.

Option D: The movie was made to depict an example of planned obsolescence before fast fashion became a thing. The para itself starts with 'it's hardly a new idea' before the author gives the example (Phoebus Cartel) which was the basis of the movie. Hence, the purpose of mentioning the movie can be to reiterate the idea that planned obsolescence did take place in the past. Choice (D)

undefined

DIRECTIONS for questions 26 to 29: The passage given below is accompanied by a set of four questions. Choose the best answer to each question.

A new government decree in France is forcing manufacturers to tell consumers how long their appliances will last. French companies will also have to inform consumers how long spare parts for the product will be available, or risk a fine. And if this wasn't enough, from next year faulty products - whether it's mobile phones to washing machines - will have to be repaired or replaced for free within two years of being purchased.

The French government hopes this will help to combat "planned obsolescence" - the practice of designing products with restricted life spans to ensure consumers will buy more.

It's hardly a new idea. In the 1920s, the Phoebus cartel had the bright idea to create bulbs that would break after 1,000 hours instead of providing the 1,500-2,000 hours that previous bulbs managed. Before the advent of "fast fashion" - planned obsolescence in action - it was the basis for The Man in the White Suit, a 1951 Ealing comedy starring Alec Guinness as an inventor who makes a dirt-repelling everlasting fibre, and promptly finds himself a target for trade unionists and mill owners who fear he will destroy the textile business with one perfect product.

Today, it's hard not to become paranoid when you start thinking about the appliances we use. As with various laptops and the sleekest mobile phones, they are sealed in, so when the battery dies it's easier to chuck the whole thing away than try to

repair it.

Manufacturers say there are valid reasons for all of this. Sealed batteries, for instance, make for a thinner product than one that can be upgraded or fixed, while tamper-proof screws can be safer.

But Janet Gunter from Restart, a charity that aims to get people fixing and tinkering again, says bad design, or cheap materials, can also be blamed for limited lifespans. "Things are not designed to be taken apart anymore." She points out that some new phones don't have removable batteries or that memory chips on tablets and phones are soldered on to circuit boards: you can't upgrade them easily, so once they run out or fill up, you're stuck. Will French law make planned obsolescence obsolete?

Q29. Which of the following, if true, defends the manufacturers' argument in favour of using sealed batteries?

- a) Customers demand thin phones over phones with replaceable batteries.
- b) It is easier to chuck a battery away than to try and repair it. Your answer is incorrect
- c) Customers like to decide whether to repair a phone or to replace it.
- d) Limited lifespan could be due to use of cheap materials.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	85
Avg. time spent on this question by all students	84
Difficulty Level	D
Avg. time spent on this question by students who got this question right	78
% of students who attempted this question	39.82
% of students who got the question right of those who attempted	79.65

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 358

This is the manufacturers' argument: Manufacturers say there are valid reasons for all of this. Sealed batteries, for instance, make for a thinner product than one that can be upgraded or fixed, while tamper-proof screws can be safer.

Option A: Since, sealed batteries are ideal for sleek phones and customers prefer thinner phones, this strengthens the manufacturers' argument about making batteries which are sealed in. Hence, Option A is the answer.

Option B: The ease of chucking a battery than repairing it doesn't give us a justification for the design – why was the battery not designed to be repaired. Hence, Option B doesn't justify the use of sealed batteries and hence doesn't defend the manufacturers' argument. Option B is not the answer.

Option C: If this were the case, a sealed battery is bad news as it doesn't give customers the choice. Therefore, it will weaken the argument of the manufacturers. Hence, Option C is not the answer.

Option D: Consider the sentence: But Janet Gunter from Restart, a charity that aims to get people fixing and tinkering again, says bad design, or cheap materials, can also be blamed for limited lifespans. This tells us how cheap materials could be another reason for the limited lifespan of appliances, apart from planned obsolescence. While this takes a little blame away from the manufacturers (by arguing that it is not always planned obsolescence), it doesn't talk about their defence of the design of appliances. Also, please note that the sentence starts with 'But' which is a good indicator that this example doesn't definitely agree with the preceding idea. Hence, Option D is not the answer.

Choice (A)

Q30. DIRECTIONS for question 30: The paragraph given below is followed by four alternative summaries. Choose the option that best captures the author's position.

Julian Jaynes believed that language needed to exist before consciousness was possible and he cited two Homeric poems, The Iliad and The Odyssey. He wrote that the characters in The Iliad don't look inward and they take no independent initiative. They only do what is suggested by the gods. When something needs to happen, a god appears and speaks. Without these voices, the heroes would stand frozen on the beaches of Troy, like puppets. The combination of instinct and voices - the bicameral mind - would have allowed humans to manage for quite some time, as long as their societies were rigidly hierarchical. But 3,000 years ago, in the breakdown of the bicameral mind, bits of the conscious mind would have come to awareness, as the voices mostly died away. That led to a more flexible way of coping with the decisions of everyday life - one better suited to the chaos that ensued when the gods went silent. By The Odyssey, the characters are capable of something like interior thought. The modern mind, with its internal narrative and longing for direction from a higher power, appears.

- a) Julian Jaynes was of the view that the characters of the Iliad are conscious even though they are puppets of the gods while the characters of the Odyssey were capable of introspection and taking decisions on their own. Hence consciousness cannot exist without language.
- b) Julian Jaynes believed that the characters of the Iliad were by and large very similar to the characters of the Odyssey as they looked for direction from a higher power in times of chaos.
- c) Julian Jaynes believed that the characters of the Iliad existed before the advent of language, so there are no arguments in their stories, while the characters of the Odyssey were fully capable of interior thought and of speaking to the gods.
- d) To assert that language preceded consciousness, Julian Jaynes cited The Iliad in which the portrayal of the characters suggested a bicameral mind, and The Odyssey, at the time of which, the characters had gone on to develop an internal narrative, a trait of the modern mind.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	114
Avg. time spent on this question by all students	164
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	163
% of students who attempted this question	17.31
% of students who got the question right of those who attempted	83.97

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The main point of the paragraph is that Julian Jaynes argued that language preceded consciousness citing The Iliad, with characters who had a bicameral mind, and The Odyssey, by which time, characters developed an internal narrative, a trait of the modern mind.

Option A: He wrote that the characters in The Iliad don't look inward and take no independent initiative. They only do what is suggested by the gods. So "conscious even though they are puppets of the Gods" in choice A is an inapt description of the characters of the Iliad. Also, the last sentence of choice A is a distortion of the first sentence of the para. Choice A is not the summary.

Option B: The paragraph mentions differences between the characters of the Iliad and the Odyssey. So "the characters of the Iliad were by and large very similar to the characters of the Odyssey" as given in choice B is incorrect. Choice B is not the apt summary.

Option C: The paragraph does not tell us when language developed. The first part of choice C cannot be inferred from the para. Also "characters of the Odyssey were fully capable of speaking to the Gods" cannot be inferred from the passage. Choice C is not the answer.

Option D: Choice D forms a correct summary of the para.

Choice (D)

undefined

Q31. DIRECTIONS for question 31: The sentences given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a number. Decide on the proper order for the five sentences and key in the sequence of five numbers as your answer, in the input box given below the question.

1. He writes that in 1982, a new boss had shocked the then-editor with a plan to computerise the dictionary's ways: both the lexicographic work itself, with digital research files, and its outcome, an OED on compact disc.
2. Many readers think that something is a "real word" if it's "in the dictionary".
3. Lexicographers prefer to think they are a different kind of cop: the kind in the title of John Simpson's "The Word Detective", published in October 2016, a memoir of his time as editor-in-chief of the Oxford English Dictionary (OED).
4. But that wasn't the final shape either: by the end of Mr. Simpson's tenure in 2013, the OED's flagship product was a website with entries richly linked to one another and updated at regular intervals.
5. But lexicographers don't like to regard themselves as letting the trusty words in and keeping the bad guys out.

Your Answer:25314 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	125
Avg. time spent on this question by all students	153
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	156
% of students who attempted this question	21.47
% of students who got the question right of those who attempted	39.54

[Video Solution](#)

[Text Solution](#)

Sentence 1: Sentence 1 has the pronoun 'he'. It makes a reference to 'computerise the dictionary's ways'.

Sentence 2: Sentence 2 is an independent sentence and can begin the para.

Sentence 3: Sentence 3 has the keywords "different kind of cop" and introduces John Simpson's "The Word Detective". It also has the full form of the OED.

Sentence 4: Sentence 4 again has the contrast conjunction 'but'. It sounds conclusive in tone with the explanation of what the 'final shape' was.

Sentence 5: Sentence 5 has the contrast conjunction 'but'. It tells us what lexicographers don't like to regard themselves as This means that sentence 5 corrects a viewpoint and can be placed only after another sentence.

So, sentence 2 is a general sentence that begins the para.

Sentences 2 and 5 form a mandatory pair. "something is a "real word" if it's "in the dictionary"" in sentence 2 links with "letting the trusty words in and keeping the bad guys out" in sentence 5. Also, "lexicographers don't like to regard themselves ..." in sentence 5 contrasts or corrects the view of the readers in sentence 2.

Sentences 5 and 3 form another logical block. "lexicographers don't like to regard themselves as letting the trusty words in and keeping the bad guys out" in sentence 5 links with "Lexicographers prefer to think they are a different kind of cop" in sentence 3. Sentence 5 is followed by sentence 3.

Sentence 3 links with sentence 1. "He writes" in sentence 1 points to "John Simpson" in sentence 3.

"shocked the then-editor with a plan to computerise the dictionary's ways: both the lexicographic work itself and its outcome" in sentence 1 links with "Lexicographers prefer to think they are a different kind of cop" in sentence 3. So sentence 3 is followed by sentence 1.

Sentences 1 and 4 form another logical block. "But that wasn't the final shape either" in 4 links with "plan to computerise the dictionary's ways: both the lexicographic work itself and its outcome" in sentence 1. Sentence 4 concludes the para. "the OED's flagship product was a website with entries richly linked to one another and updated at regular intervals" in 4 points to "different kind of cop" given earlier in sentence 3. So, 25314.

Ans: (25314)

undefined

DIRECTIONS for questions 32 to 34: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Ask a researcher what annoys him most about scientific publishing, and slowness will come near the top of the list of gripes. It takes nearly six months for a manuscript to wend its way from submission to publication. Worse, before a paper is accepted by a journal, it is often rejected by one or more others. The reason need not be a fatal flaw in the research; sometimes the work is simply not splashy enough for outlets high up in the pecking order. But in the process, each journal's editors send the paper for peer review - appraisal by experts in the relevant field. And, the reviewers do not even get paid for their efforts.

Some publishers are at last beginning to feel that this is an awful waste of resources. Last month a number of them said

they would give authors of papers they reject the option of making referees' reports available to the other publishers.

The practice is not unheard of within publishing groups. Genome Biology, BioMed Central's flagship journal, which accepts just one paper in ten, passes 40% of the sound but humdrum sort it spurns to its less prestigious sister publications with reviews attached. Half of those end up in a BMC journal. But similar arrangements between competing publishers have not caught on.

Other ways to speed up peer review are being tested, too. Rubriq, a company in North Carolina, plans to offer fast, independent reports to authors for a fee. To reviewers, meanwhile, it is offering payment for the job. ...

The customers of a Finnish firm, Peerage of Science, are not authors, but journals themselves; 23 have signed up so far. Publications in effect outsource the organisation of peer review to the company on the understanding that other clients can look at the results, too. Then, if the first customer rejects a researcher's offering, those others can choose quickly whether to snap it up instead. Peerage's fee is paid by whichever journal ultimately publishes the offering in question.

The number of submissions to journals is outpacing reviewers' capacity to deal with them. PLoS One already churns through 4,000 papers a month, putting its referees under tremendous strain. With luck, parallel processing of peer review in this manner will reduce the stress on the system, and thus the time frustrated researchers have to wait before their gems see the light of day.

Q32. Which of the following best serves as the central idea of this passage?

- a) Publishers with multiple overlapping journals and journals with very narrow specialties increase the demands on the time and effort of willing reviewers.
- b) Not all publishers maintain proper quality-control mechanisms to ensure that fake information is not being shared online.
- c) Parallel reviews look set to speed up the publication of research papers.
- d) Peer review is considered necessary for any article to be published in a scientific journal and reviewers must be paid for this mammoth task.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	76
Avg. time spent on this question by all students	231
Difficulty Level	M
Avg. time spent on this question by students who got this question right	231
% of students who attempted this question	23.09
% of students who got the question right of those who attempted	51.76

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 396

Option A: There is no mention of "Publishers with multiple overlapping journals" or "journals with very narrow specialties". So choice A is out of scope.

Option B: The focus of the passage is not to discuss "quality-control mechanisms" or the lack thereof, in academic publishing. Choice B is not the answer.

Option C: Last month a number of publishers said they would give authors of papers they reject the option of making referees' reports available to the other publishers. ... Genome Biology, BioMed Central's flagship journal, which accepts just one paper in ten, passes 40% of the sound but humdrum sort it spurns to its less prestigious sister publications with reviews attached. ... Publications in effect outsource the organisation of peer review to the company on the understanding that other clients can look at the results, too. With luck, parallel processing of peer review in this manner will reduce the stress on the system, and thus the time frustrated researchers have to wait before their gems see the light of day. Hence we can infer that parallel reviews will speed up the publication of research papers. Choice C is the answer.

Option D: But in the process, each journal's editors send the paper for peer review – appraisal by experts in the relevant field. The first part of choice D is true. And, the reviewers do not even get paid for their efforts (until now). To reviewers, meanwhile, Rubriq, a company, is offering payment for the job. ... But the second part of choice D, though probably true, is not part of the main idea of the passage. Choice D is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 32 to 34: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Ask a researcher what annoys him most about scientific publishing, and slowness will come near the top of the list of gripes. It takes nearly six months for a manuscript to wend its way from submission to publication. Worse, before a paper is accepted by a journal, it is often rejected by one or more others. The reason need not be a fatal flaw in the research; sometimes the work is simply not splashy enough for outlets high up in the pecking order. But in the process, each journal's editors send the paper for peer review - appraisal by experts in the relevant field. And, the reviewers do not even get paid for their efforts.

Some publishers are at last beginning to feel that this is an awful waste of resources. Last month a number of them said they would give authors of papers they reject the option of making referees' reports available to the other publishers.

The practice is not unheard of within publishing groups. Genome Biology, BioMed Central's flagship journal, which accepts just one paper in ten, passes 40% of the sound but humdrum sort it spurns to its less prestigious sister publications with reviews attached. Half of those end up in a BMC journal. But similar arrangements between competing publishers have not caught on.

Other ways to speed up peer review are being tested, too. Rubriq, a company in North Carolina, plans to offer fast, independent reports to authors for a fee. To reviewers, meanwhile, it is offering payment for the job. ...

The customers of a Finnish firm, Peerage of Science, are not authors, but journals themselves; 23 have signed up so far. Publications in effect outsource the organisation of peer review to the company on the understanding that other clients can look at the results, too. Then, if the first customer rejects a researcher's offering, those others can choose quickly whether to snap it up instead. Peerage's fee is paid by whichever journal ultimately publishes the offering in question.

The number of submissions to journals is outpacing reviewers' capacity to deal with them. PLoS One already churns through 4,000 papers a month, putting its referees under tremendous strain. With luck, parallel processing of peer review in this manner will reduce the stress on the system, and thus the time frustrated researchers have to wait before their gems see the light of day.

Q33. "But similar arrangements between competing publishers have not caught on." Which of the following choices points correctly to the "arrangement" mentioned in the context?

- a) Publishers can retract a journal article when it does not meet the stipulated standards.
- b) A mechanism is now put in place to honour and reward hard-working reviewers.
- c) A new quality control mechanism will be shared among the publishers of scientific journals to increase ethical practice in the academic publishing world.
- d) Referees' reports on papers that have been rejected by a publisher are made available to other publishers.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	131
Avg. time spent on this question by all students	92
Difficulty Level	D
Avg. time spent on this question by students who got this question right	89
% of students who attempted this question	21.77
% of students who got the question right of those who attempted	89.27

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 396

We need to refer to the second and the third paras of the passage.

Option A: Publishers can retract a journal article. Choice A is true but is out of context.

Option B: In the process, each journal's editors send the paper for peer review – appraisal by experts in the relevant field. And, the reviewers do not even get paid for their efforts. Rubriq, a company in North Carolina, plans to offer fast, independent reports to authors for a fee. To reviewers, meanwhile, it is offering payment for the job. ... Choice B again runs tangent to the discussion. It does not point correctly to the "arrangement" mentioned in the context.

Option C: "quality control mechanism" or "ethical practice" is not the chief focus of the discussion in the context of "similar arrangements". Choice C is far-fetched.

Option D: Last month a number of them said they would give authors of papers they reject the option of making referees' reports available to the other publishers. Publications in effect outsource the organisation of peer review to the company on the understanding that other clients can look at the results, too. Then, if the first customer rejects a researcher's offering, those others can choose quickly whether to snap it up instead. Choice D points specifically to the "similar arrangement" mentioned in the context.

Choice (D)

undefined

DIRECTIONS for questions 32 to 34: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Ask a researcher what annoys him most about scientific publishing, and slowness will come near the top of the list of gripes. It takes nearly six months for a manuscript to wend its way from submission to publication. Worse, before a paper is accepted by a journal, it is often rejected by one or more others. The reason need not be a fatal flaw in the research; sometimes the work is simply not splashy enough for outlets high up in the pecking order. But in the process, each journal's editors send the paper for peer review - appraisal by experts in the relevant field. And, the reviewers do not even get paid for their efforts.

Some publishers are at last beginning to feel that this is an awful waste of resources. Last month a number of them said they would give authors of papers they reject the option of making referees' reports available to the other publishers.

The practice is not unheard of within publishing groups. Genome Biology, BioMed Central's flagship journal, which accepts just one paper in ten, passes 40% of the sound but humdrum sort it spurns to its less prestigious sister publications with reviews attached. Half of those end up in a BMC journal. But similar arrangements between competing publishers have not caught on.

Other ways to speed up peer review are being tested, too. Rubriq, a company in North Carolina, plans to offer fast, independent reports to authors for a fee. To reviewers, meanwhile, it is offering payment for the job. ...

The customers of a Finnish firm, Peerage of Science, are not authors, but journals themselves; 23 have signed up so far. Publications in effect outsource the organisation of peer review to the company on the understanding that other clients can look at the results, too. Then, if the first customer rejects a researcher's offering, those others can choose quickly whether to snap it up instead. Peerage's fee is paid by whichever journal ultimately publishes the offering in question.

The number of submissions to journals is outpacing reviewers' capacity to deal with them. PLoS One already churns through 4,000 papers a month, putting its referees under tremendous strain. With luck, parallel processing of peer review in this manner will reduce the stress on the system, and thus the time frustrated researchers have to wait before their gems see the light of day.

Q34. Which of the following is an advantage that the Finnish firm, Peerage of Science, offers to its customers?

- a) The journals will have a better idea on how far up the publication pecking order they are.
- b) The journals need not spend unnecessary time in independently reviewing each article.
- c) Authors will get a reality check on how far up the publication pecking order a paper might be resubmitted.
- d) Communication between editors of sister journals would improve and predatory publishers who wish to publish as many papers as possible at the cost of quality would be avoided by the authors.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	192
Avg. time spent on this question by all students	133
Difficulty Level	M
Avg. time spent on this question by students who got this question right	125
% of students who attempted this question	22.13
% of students who got the question right of those who attempted	73.18

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 396

Refer to the penultimate para.

Option A: Finding about a journal's position in the pecking order is not an advantage that this firm provides. If one journal rejects the researcher's offering and another journal accepts it, the para does not imply that the second journal is inferior to the first. Choice A is not the answer.

Option B: Publications in effect outsource the organisation of peer review to the company on the understanding that other clients can look at the results, too. Then, if the first customer rejects a researcher's offering, those others can choose quickly whether to snap it up instead. Choice B is the correct answer as can be inferred from the last para.

Option C: Refer to para 1: Worse, before a paper is accepted by a journal, it is often rejected by one or more others. The reason need not be a fatal flaw in the research; sometimes the work is simply not splashy enough for outlets high up in the pecking order. However, from the penultimate para, we know that the customers of the Finnish firm, Peerage of Science, are not authors, but journals themselves; 23 have signed up so far. Hence choice C is not the answer.

Option D: But in the process, each journal's editors send the paper for peer review – appraisal by experts in the relevant field. The outcome of offering fast, independent referees' reports to authors for a fee is not merely to facilitate or improve communication between editors of sister journals. The passage does not talk about predatory publishing or quality of publishing. So choice D is out of scope.

Choice (B)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

On a particular day, six persons, A through F, got into and got down a bus at seven different bus stops - S1 through S7. The bus stopped at the seven stops in the same order as mentioned above. The first table below provides the persons who got into and got down the bus at each bus stop and the second table provides the duration (in minutes) for which each person was in the bus:

Bus Stop	Persons who got into the bus	Persons who got out of the bus
S1	A, F	-
S2	E	-
S3	D	-
S4	B	A, E
S5	C	D, F
S6	-	B
S7	-	C

Person	Duration in bus (minutes)
A	41
B	16
C	23
D	17
E	29
F	47

Assume that the duration for which the bus stops at any bus stop is negligible.

Q1. DIRECTIONS for question 1: Select the correct alternative from the given choices.

How many minutes did the bus take to reach S7 from S6?

a) 12

b) 13 Your answer is correct

c) 14

d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	93
Avg. time spent on this question by all students	341
Difficulty Level	E
Avg. time spent on this question by students who got this question right	338
% of students who attempted this question	45.04
% of students who got the question right of those who attempted	85.62

[Video Solution](#)

[Text Solution](#)

The table below provides, for each person, the bus stop at which he got into the bus and the bus stop at which he got out of the bus.

Person	Bus Stop	Time in bus (minutes)
A	S1 to S4	41
B	S4 to S6	16
C	S5 to S7	23
D	S3 to S5	17
E	S2 to S4	29
F	S1 to S5	47

From the table, we can see that A travelled from S1 to S4, for 41 minutes, and F travelled from S1 to S5, for 47 minutes. Hence, to travel from S4 to S5, the bus would have taken 6 minutes.

B travelled from S4 to S6 for 16 minutes. To travel from S5 to S6, the bus would have taken 10 minutes.

C travelled from S5 to S7, for 23 minutes. To travel from S6 to S7, the bus would have taken 13 minutes.

D travelled from S3 to S5, for 17 minutes. To travel from S3 to S4, the bus would have taken 11 minutes.

E travelled from S2 to S4, for 29 minutes. To travel from S2 to S3, the bus would have taken 18 minutes.

A travelled from S1 to S4, for 41 minutes. To travel from S1 to S4, the bus would have taken $41 - 18 - 11 = 12$ minutes.

Hence, the bus took 12 minutes to travel from S1 to S2; 18 minutes for S2 to S3; 11 minutes for S3 to S4; 6 minutes for S4 to S5; 10 minutes for S5 to S6; 13 minutes for S6 to S7.

The bus took 13 minutes to reach S7 from S6.

Choice (B)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

On a particular day, six persons, A through F, got into and got down a bus at seven different bus stops - S1 through S7. The bus stopped at the seven stops in the same order as mentioned above. The first table below provides the persons who got into and got down the bus at each bus stop and the second table provides the duration (in minutes) for which each person was in the bus:

Bus Stop	Persons who got into the bus	Persons who got out of the bus
S1	A, F	-
S2	E	-
S3	D	-
S4	B	A, E
S5	C	D, F
S6	-	B
S7	-	C

Person	Duration in bus (minutes)
A	41
B	16
C	23
D	17
E	29
F	47

Assume that the duration for which the bus stops at any bus stop is negligible.

Q2. DIRECTIONS for questions 2 and 3: Type your answer in the text box provided below the question.

For how many minutes were both B and D in the bus?

Your Answer:6 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	154
Avg. time spent on this question by all students	95
Difficulty Level	E
Avg. time spent on this question by students who got this question right	83
% of students who attempted this question	46.84
% of students who got the question right of those who attempted	80.43

[Video Solution](#)

[Text Solution](#)

The table below provides, for each person, the bus stop at which he got into the bus and the bus stop at which he got out of the bus.

Person	Bus Stop	Time in bus (minutes)
A	S1 to S4	41
B	S4 to S6	16
C	S5 to S7	23
D	S3 to S5	17
E	S2 to S4	29
F	S1 to S5	47

From the table, we can see that A travelled from S1 to S4, for 41 minutes, and F travelled from S1 to S5, for 47 minutes. Hence, to travel from S4 to S5, the bus would have taken 6 minutes.

B travelled from S4 to S6 for 16 minutes. To travel from S5 to S6, the bus would have taken 10 minutes.

C travelled from S5 to S7, for 23 minutes. To travel from S6 to S7, the bus would have taken 13 minutes.

D travelled from S3 to S5, for 17 minutes. To travel from S3 to S4, the bus would have taken 11 minutes.

E travelled from S2 to S4, for 29 minutes. To travel from S2 to S3, the bus would have taken 18 minutes.

A travelled from S1 to S4, for 41 minutes. To travel from S1 to S4, the bus would have taken $41 - 18 - 11 = 12$ minutes.

Hence, the bus took 12 minutes to travel from S1 to S2; 18 minutes for S2 to S3; 11 minutes for S3 to S4; 6 minutes for S4 to S5; 10 minutes for S5 to S6; 13 minutes for S6 to S7.

Both B and D were in the bus from S4 to S5. Required duration = 6 minutes.

Ans: (6)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

On a particular day, six persons, A through F, got into and got down a bus at seven different bus stops - S1 through S7. The bus stopped at the seven stops in the same order as mentioned above. The first table below provides the persons who got into and got down the bus at each bus stop and the second table provides the duration (in minutes) for which each person was in the bus:

Bus Stop	Persons who got into the bus	Persons who got out of the bus
S1	A, F	-
S2	E	-
S3	D	-
S4	B	A, E
S5	C	D, F
S6	-	B
S7	-	C

Person	Duration in bus (minutes)
A	41
B	16
C	23
D	17
E	29
F	47

Assume that the duration for which the bus stops at any bus stop is negligible.

Q3. DIRECTIONS for questions 2 and 3: Type your answer in the text box provided below the question.

For how many minutes were there exactly two persons in the bus?

Your Answer:10 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	114
Difficulty Level	M
Avg. time spent on this question by students who got this question right	108
% of students who attempted this question	43.8
% of students who got the question right of those who attempted	68.29

[Video Solution](#)

[Text Solution](#)

The table below provides, for each person, the bus stop at which he got into the bus and the bus stop at which he got out of the bus.

Person	Bus Stop	Time in bus (minutes)
A	S1 to S4	41
B	S4 to S6	16
C	S5 to S7	23
D	S3 to S5	17
E	S2 to S4	29
F	S1 to S5	47

From the table, we can see that A travelled from S1 to S4, for 41 minutes, and F travelled from S1 to S5, for 47 minutes. Hence, to travel from S4 to S5, the bus would have taken 6 minutes.

B travelled from S4 to S6 for 16 minutes. To travel from S5 to S6, the bus would have taken 10 minutes.

C travelled from S5 to S7, for 23 minutes. To travel from S6 to S7, the bus would have taken 13 minutes.

D travelled from S3 to S5, for 17 minutes. To travel from S3 to S4, the bus would have taken 11 minutes.

E travelled from S2 to S4, for 29 minutes. To travel from S2 to S3, the bus would have taken 18 minutes.

A travelled from S1 to S4, for 41 minutes. To travel from S1 to S4, the bus would have taken $41 - 18 - 11 = 12$ minutes.

Hence, the bus took 12 minutes to travel from S1 to S2; 18 minutes for S2 to S3; 11 minutes for S3 to S4; 6 minutes for S4 to S5; 10 minutes for S5 to S6; 13 minutes for S6 to S7.

From S1 to S2, there were exactly two persons (A and F) in the bus.

From S5 to S6, there were exactly two persons (B and C) in the bus.

Hence, for $12 + 10 = 22$ minutes, there were exactly two persons in the bus.

Ans: (22)

undefined

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

On a particular day, six persons, A through F, got into and got down a bus at seven different bus stops - S1 through S7. The bus stopped at the seven stops in the same order as mentioned above. The first table below provides the persons who got into and got down the bus at each bus stop and the second table provides the duration (in minutes) for which each person was in the bus:

Bus Stop	Persons who got into the bus	Persons who got out of the bus
S1	A, F	-
S2	E	-
S3	D	-
S4	B	A, E
S5	C	D, F
S6	-	B
S7	-	C

Person	Duration in bus (minutes)
A	41
B	16
C	23
D	17
E	29
F	47

Assume that the duration for which the bus stops at any bus stop is negligible.

Q4. DIRECTIONS for question 4: Select the correct alternative from the given choices.

For how many minutes were there at least three persons in the bus?

- a) 35
- b) 38
- c) 42
- d) 45

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	6
Avg. time spent on this question by all students	107
Difficulty Level	M
Avg. time spent on this question by students who got this question right	103
% of students who attempted this question	39.78
% of students who got the question right of those who attempted	89.33

[Video Solution](#)

[Text Solution](#)

The table below provides, for each person, the bus stop at which he got into the bus and the bus stop at which he got out of the bus.

Person	Bus Stop	Time in bus (minutes)
A	S1 to S4	41
B	S4 to S6	16
C	S5 to S7	23
D	S3 to S5	17
E	S2 to S4	29
F	S1 to S5	47

From the table, we can see that A travelled from S1 to S4, for 41 minutes, and F travelled from S1 to S5, for 47 minutes. Hence, to travel from S4 to S5, the bus would have taken 6 minutes.

B travelled from S4 to S6 for 16 minutes. To travel from S5 to S6, the bus would have taken 10 minutes.

C travelled from S5 to S7, for 23 minutes. To travel from S6 to S7, the bus would have taken 13 minutes.

D travelled from S3 to S5, for 17 minutes. To travel from S3 to S4, the bus would have taken 11 minutes.

E travelled from S2 to S4, for 29 minutes. To travel from S2 to S3, the bus would have taken 18 minutes.

A travelled from S1 to S4, for 41 minutes. To travel from S1 to S4, the bus would have taken $41 - 18 - 11 = 12$ minutes.

Hence, the bus took 12 minutes to travel from S1 to S2; 18 minutes for S2 to S3; 11 minutes for S3 to S4; 6 minutes for S4 to S5; 10 minutes for S5 to S6; 13 minutes for S6 to S7.

There were at least three persons in the bus from S2 to S3, S3 to S4 and S4 to S5, for a total of $18 + 11 + 6 = 35$ minutes.

Choice (A)

undefined

Q5. DIRECTIONS for question 5: Each question is followed by two statements, I and II. Answer each question based on the following instructions:

Among the candidates who applied for CAT 2018, 40% are females. One third of these female candidates have an

engineering background. What is the total number of candidates with a non-engineering background as a percentage of the total number of applicants for CAT 2018?

- I.
Two thirds of the male candidates who applied for CAT 2018 have a non-engineering background.
- II.
Among the applicants for CAT 2018, the number of male candidates with an engineering background was twice the number of female candidates with a non-engineering background.

- a) if the question can be answered by one of the statements alone but not by the other.
- b) if the question can be answered by using either statement alone. Your answer is correct
- c) if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.
- d) if the question cannot be answered even by using both the statements together.

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	162
Difficulty Level	M
Avg. time spent on this question by students who got this question right	154
% of students who attempted this question	44.63
% of students who got the question right of those who attempted	77.96

[Video Solution](#)

[Text Solution](#)

As it is given that, 40% of the applicants are females
 \therefore 60% of them are males.

$$\text{i.e., } \frac{2}{3} \times 60\% = 40\% \text{ of the total.}$$

Given among females, one-third of them have an engineering background.

\therefore Two-thirds of the females have non-engineering background.

From statement A alone, two-thirds of the male applicants have a non-engineering background.
 \therefore Total employees with a non-engineering background

$$= \frac{2}{3} \times 100 = 66\frac{2}{3}\%$$

From statement B alone, the number of males with a non-engineering background was twice the number of females with a non-engineering background.

\therefore Total applicants with a non-engineering background

$$= \frac{2}{3} \times 40 + \frac{4}{3} \times 40 = 80\% \text{ of the total.}$$

The question can be answered using either statement alone.

Choice (B)

undefined

DIRECTIONS for questions 6 to 9: Answer the questions on the basis of the information given below.

During a particular month, Tarak visited six cities, Delhi, Chennai, Mumbai, Kolkata, Hyderabad and Bangalore, not necessarily in the same order. After visiting the six cities, he ranked the cities, from 1 to 6, based on the order of his preference. The ranks of any two cities that he visited one immediately after the other differed by at least two, while for any two cities whose ranks differed by exactly two, he visited at least one city between them. It is also known that

i.
he visited the city ranked three before he visited Chennai.

ii.
he visited Kolkata after he visited the city ranked 1.

iii.
Mumbai was not the third city that he visited.

iv.
Delhi was the fourth city that he visited.

v.
he visited the city ranked two before he visited Bangalore.

vi.
he visited Hyderabad before he visited Mumbai.

Q6. DIRECTIONS for questions 6 and 7: Type your answer in the text box provided below the question.

What is the rank of the second city that he visited?

Your Answer:5 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	13
Avg. time spent on this question by all students	502
Difficulty Level	D
Avg. time spent on this question by students who got this question right	586
% of students who attempted this question	19.6
% of students who got the question right of those who attempted	22.51

[Video Solution](#)

[Text Solution](#)

Given that the ranks of any two cities that he visited one immediately after the other differed by at least 2. But also, if these ranks differed by exactly 2, he visited at least one city between them. Hence, if the ranks differed by 2, he could not have visited the two cities one after the other.

Hence, for any pair of cities that he visited one after the other, the rank must differ by at least 3.

Consider the city ranked 4th. The only city which he could have visited immediately before or after will be the city ranked 1. Similarly, for the city ranked 3, the only which he could have visited immediately before or after will be the city ranked 6.

Hence, the city ranked 4 and 3 must be the first and last cities that he visited in any order.

Let the city ranked 4 be the first city. Then, the city ranked 1 must be the second city that he visited. The third city must differ from 1 by at least 3. Hence, the third city can be ranked 5 or 6. City ranked 3 will be the last city and the city ranked 6 must be the city that he visited fifth. Hence, the third city must be ranked 5 and the fourth city must be ranked 2. This is one possible case.

Consider the case where the city ranked 3 is first and we get another case, which is the reverse order of the previous case. Hence, two possible order of ranks exist: 4, 1, 5, 2, 6, 3 OR 3, 6, 2, 5, 1, 4.

From (i), he visited the city ranked three before he visited Chennai. Hence, only one possible case exists: 3, 6, 2, 5, 1, 4.

From (iv), Delhi was the fourth city that he visited and must be ranked 2.

From (ii), he visited Kolkata after visiting the city ranked 1. Since he visited only one city after visiting the city ranked 1, he must have visited Kolkata last and this must be ranked 4.

From (v), he visited the city ranked 2 before he visited Bangalore. Hence, he must have visited Bangalore 5th and this must have been ranked 1st.

From (vi) and (iii), Mumbai has to be the second city that he visited and Hyderabad must be the first. Hence, Chennai must be the third city that he visited.

The following table provides the order in which he visited the six cities and the ranks of the six cities:

Order	Rank	City
1	3	Hyderabad
2	6	Mumbai
3	2	Chennai
4	5	Delhi
5	1	Bangalore
6	4	Kolkata

The second city that he visited was ranked 6.

Ans: (6)

DIRECTIONS for questions 6 to 9: Answer the questions on the basis of the information given below.

During a particular month, Tarak visited six cities, Delhi, Chennai, Mumbai, Kolkata, Hyderabad and Bangalore, not necessarily in the same order. After visiting the six cities, he ranked the cities, from 1 to 6, based on the order of his preference. The ranks of any two cities that he visited one immediately after the other differed by at least two, while for any two cities whose ranks differed by exactly two, he visited at least one city between them. It is also known that

i. he visited the city ranked three before he visited Chennai.

ii. he visited Kolkata after he visited the city ranked 1.

iii. Mumbai was not the third city that he visited.

iv. Delhi was the fourth city that he visited.

v. he visited the city ranked two before he visited Bangalore.

vi. he visited Hyderabad before he visited Mumbai.

Q7. DIRECTIONS for questions 6 and 7: Type your answer in the text box provided below the question.

What is the rank of Delhi?

Your Answer:3 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	62
Difficulty Level	D
Avg. time spent on this question by students who got this question right	62
% of students who attempted this question	20.45
% of students who got the question right of those who attempted	25.27

[Video Solution](#)

[Text Solution](#)

Given that the ranks of any two cities that he visited one immediately after the other differed by at least 2. But also, if these ranks differed by exactly 2, he visited at least one city between them. Hence, if the ranks differed by 2, he could not have visited the two cities one after the other.

Hence, for any pair of cities that he visited one after the other, the rank must differ by at least 3.

Consider the city ranked 4th. The only city which he could have visited immediately before or after will be the city ranked 1. Similarly, for the city ranked 3, the only which he could have visited immediately before or after will be the city ranked 6.

Hence, the city ranked 4 and 3 must be the first and last cities that he visited in any order.

Let the city ranked 4 be the first city. Then, the city ranked 1 must be the second city that he visited. The third city must differ from 1 by at least 3. Hence, the third city can be ranked 5 or 6. City ranked 3 will be the last city and the city ranked 6 must be the city that he visited fifth. Hence, the third city must be ranked 5 and the fourth city must be ranked 2. This is one possible case.

Consider the case where the city ranked 3 is first and we get another case, which is the reverse order of the previous case. Hence, two possible order of ranks exist: 4, 1, 5, 2, 6, 3 OR 3, 6, 2, 5, 1, 4.

From (i), he visited the city ranked three before he visited Chennai. Hence, only one possible case exists: 3, 6, 2, 5, 1, 4.

From (iv), Delhi was the fourth city that he visited and must be ranked 2.

From (ii), he visited Kolkata after visiting the city ranked 1. Since he visited only one city after visiting the city ranked 1, he must have visited Kolkata last and this must be ranked 4.

From (v), he visited the city ranked 2 before he visited Bangalore. Hence, he must have visited Bangalore 5th and this must have been ranked 1st.

From (vi) and (iii), Mumbai has to be the second city that he visited and Hyderabad must be the first. Hence, Chennai must be the third city that he visited.

The following table provides the order in which he visited the six cities and the ranks of the six cities:

Order	Rank	City
1	3	Hyderabad
2	6	Mumbai
3	2	Chennai
4	5	Delhi
5	1	Bangalore
6	4	Kolkata

Delhi was ranked 5.

Ans: (5)

undefined

DIRECTIONS for questions 6 to 9: Answer the questions on the basis of the information given below.

During a particular month, Tarak visited six cities, Delhi, Chennai, Mumbai, Kolkata, Hyderabad and Bangalore, not necessarily in the same order. After visiting the six cities, he ranked the cities, from 1 to 6, based on the order of his preference. The ranks of any two cities that he visited one immediately after the other differed by at least two, while for any two cities whose ranks differed by exactly two, he visited at least one city between them. It is also known that

- i. he visited the city ranked three before he visited Chennai.
- ii. he visited Kolkata after he visited the city ranked 1.
- iii. Mumbai was not the third city that he visited.
- iv. Delhi was the fourth city that he visited.
- v. he visited the city ranked two before he visited Bangalore.
- vi. he visited Hyderabad before he visited Mumbai.

Q8. DIRECTIONS for questions 8 and 9: Select the correct alternative from the given choices.

How many cities did he visit between Chennai and the city ranked three?

- a) **0**
- b) **1** Your answer is correct
- c) **2**
- d) **3**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	64
Difficulty Level	D
Avg. time spent on this question by students who got this question right	64
% of students who attempted this question	11.02
% of students who got the question right of those who attempted	48.32

[Video Solution](#)

[Text Solution](#)

Given that the ranks of any two cities that he visited one immediately after the other differed by at least 2. But also, if these ranks differed by exactly 2, he visited at least one city between them. Hence, if the ranks differed by 2, he could not have visited the two cities one after the other.

Hence, for any pair of cities that he visited one after the other, the rank must differ by at least 3.

Consider the city ranked 4th. The only city which he could have visited immediately before or after will be the city ranked 1. Similarly, for the city ranked 3, the only which he could have visited immediately before or after will be the city ranked 6.

Hence, the city ranked 4 and 3 must be the first and last cities that he visited in any order.

Let the city ranked 4 be the first city. Then, the city ranked 1 must be the second city that he visited. The third city must differ from 1 by at least 3. Hence, the third city can be ranked 5 or 6. City ranked 3 will be the last city and the city ranked 6 must be the city that he visited fifth. Hence, the third city must be ranked 5 and the fourth city must be ranked 2. This is one possible case.

Consider the case where the city ranked 3 is first and we get another case, which is the reverse order of the previous case. Hence, two possible order of ranks exist: 4, 1, 5, 2, 6, 3 OR 3, 6, 2, 5, 1, 4.

From (i), he visited the city ranked three before he visited Chennai. Hence, only one possible case exists: 3, 6, 2, 5, 1, 4.

From (iv), Delhi was the fourth city that he visited and must be ranked 2.

From (ii), he visited Kolkata after visiting the city ranked 1. Since he visited only one city after visiting the city ranked 1, he must have visited Kolkata last and this must be ranked 4.

From (v), he visited the city ranked 2 before he visited Bangalore. Hence, he must have visited Bangalore 5th and this must have been ranked 1st.

From (vi) and (iii), Mumbai has to be the second city that he visited and Hyderabad must be the first. Hence, Chennai must be the third city that he visited.

The following table provides the order in which he visited the six cities and the ranks of the six cities:

Order	Rank	City
1	3	Hyderabad
2	6	Mumbai
3	2	Chennai
4	5	Delhi
5	1	Bangalore
6	4	Kolkata

He visited one city between Chennai and the city ranked 3.

Choice (B)

undefined

DIRECTIONS for questions 6 to 9: Answer the questions on the basis of the information given below.

During a particular month, Tarak visited six cities, Delhi, Chennai, Mumbai, Kolkata, Hyderabad and Bangalore, not necessarily in the same order. After visiting the six cities, he ranked the cities, from 1 to 6, based on the order of his

preference. The ranks of any two cities that he visited one immediately after the other differed by at least two, while for any two cities whose ranks differed by exactly two, he visited at least one city between them. It is also known that

i. he visited the city ranked three before he visited Chennai.

ii. he visited Kolkata after he visited the city ranked 1.

iii. Mumbai was not the third city that he visited.

iv. Delhi was the fourth city that he visited.

v. he visited the city ranked two before he visited Bangalore.

vi. he visited Hyderabad before he visited Mumbai.

Q9. DIRECTIONS for questions 8 and 9: Select the correct alternative from the given choices.

Which city was ranked first?

- a) **Chennai**
- b) **Hyderabad**
- c) **Bangalore** Your answer is correct
- d) **Mumbai**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	94
Difficulty Level	D
Avg. time spent on this question by students who got this question right	103
% of students who attempted this question	12.36
% of students who got the question right of those who attempted	32.46

[Video Solution](#)

[Text Solution](#)

Given that the ranks of any two cities that he visited one immediately after the other differed by at least 2. But also, if these ranks differed by exactly 2, he visited at least one city between them. Hence, if the ranks differed by 2, he could not have visited the two cities one after the other.

Hence, for any pair of cities that he visited one after the other, the rank must differ by at least 3.

Consider the city ranked 4th. The only city which he could have visited immediately before or after will be the city ranked 1. Similarly, for the city ranked 3, the only which he could have visited immediately before or after will be the city ranked 6.

Hence, the city ranked 4 and 3 must be the first and last cities that he visited in any order.

Let the city ranked 4 be the first city. Then, the city ranked 1 must be the second city that he visited. The third city must differ from 1 by at least 3. Hence, the third city can be ranked 5 or 6. City ranked 3 will be the last city and the city ranked 6 must be the city that he visited fifth. Hence, the third city must be ranked 5 and the fourth city must be ranked 2. This is one possible case.

Consider the case where the city ranked 3 is first and we get another case, which is the reverse order of the previous case. Hence, two possible order of ranks exist: 4, 1, 5, 2, 6, 3 OR 3, 6, 2, 5, 1, 4.

From (i), he visited the city ranked three before he visited Chennai. Hence, only one possible case exists: 3, 6, 2, 5, 1, 4.

From (iv), Delhi was the fourth city that he visited and must be ranked 2.

From (ii), he visited Kolkata after visiting the city ranked 1. Since he visited only one city after visiting the city ranked 1, he must have visited Kolkata last and this must be ranked 4.

From (v), he visited the city ranked 2 before he visited Bangalore. Hence, he must have visited Bangalore 5th and this must have been ranked 1st.

From (vi) and (iii), Mumbai has to be the second city that he visited and Hyderabad must be the first. Hence, Chennai must be the third city that he visited.

The following table provides the order in which he visited the six cities and the ranks of the six cities:

Order	Rank	City
1	3	Hyderabad
2	6	Mumbai
3	2	Chennai
4	5	Delhi
5	1	Bangalore
6	4	Kolkata

Bangalore was ranked first.

Choice (C)

undefined

undefined

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum

marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
VII	21	36	30	19	45	40

Q10. DIRECTIONS for questions 10 and 11: Type your answer in the text box provided below the question.

What is the maximum number of students from Class VII who scored at least 35 marks in each of the two subjects?

Your Answer: 32 **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	293
Difficulty Level	M
Avg. time spent on this question by students who got this question right	317
% of students who attempted this question	18.61
% of students who got the question right of those who attempted	13.59

[Video Solution](#)

[Text Solution](#)

To find the maximum number of students from any class who scored at least 35 marks in each of the two subjects, we can find the maximum number of students from each class who scored at least 35 marks in each subject.

For Class VII Civics, the total marks scored by 50 students = $50 \times 30 = 1500$

One student has to score 21 and one has to score 36. Hence, the other 48 students must score $1500 - 21 - 36 = 1443$.

To maximize the number of students who scored at least 35 marks, we can assume that some students scored 35 and the others scored 21.

If there are x students who scored 35 marks, there will be $48 - x$ students who scored 21 marks.

$$\text{Hence, } 35x + 21(48 - x) = 1443 \Rightarrow x = 31.07$$

Hence, there can be 31 students who scored 35 marks, totaling $31 \times 35 = 1085$

The other 16 students must score a total of $1443 - 1085 = 358$, which is possible.

Hence, there can be a maximum of 32 (including the highest mark) students who scored at least 35 marks.

For Class VII Economics, the minimum score is 19, the average is 40. Hence, we can take one student to have scored 19 and all the others can score at least 35. In this case, there will be a maximum of 49 students who scored at least 35 marks.

All the students who scored at least 35 in Civics could also have scored at least 35 in Economics.

Hence, the maximum possible number of students = 32

Ans: (32)

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
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Your Answer:32 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	293
Difficulty Level	M
Avg. time spent on this question by students who got this question right	317
% of students who attempted this question	18.61
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[Video Solution](#)

[Text Solution](#)

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For Class VII Civics, the total marks scored by 50 students = $50 \times 30 = 1500$

One student has to score 21 and one has to score 36. Hence, the other 48 students must score $1500 - 21 - 36 = 1443$.

To maximize the number of students who scored at least 35 marks, we can assume that some students scored 35 and the others scored 21.

If there are x students who scored 35 marks, there will be $48 - x$ students who scored 21 marks.

Hence, $35x + 21(48 - x) = 1443 \Rightarrow x = 31.07$

Hence, there can be 31 students who scored 35 marks, totaling $31 \times 35 = 1085$

The other 16 students must score a total of $1443 - 1085 = 358$, which is possible.

Hence, there can be a maximum of 32 (including the highest mark) students who scored at least 35 marks.

For Class VII Economics, the minimum score is 19, the average is 40. Hence, we can take one student to have scored 19 and all the others can score at least 35. In this case, there will be a maximum of 49 students who scored at least 35 marks.

All the students who scored at least 35 in Civics could also have scored at least 35 in Economics.

Hence, the maximum possible number of students = 32

Ans: (32)

undefined

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
VII	21	36	30	19	45	40

Q11. DIRECTIONS for questions 10 and 11: Type your answer in the text box provided below the question.

What is the maximum number of students from Class VI whose score in Civics was the same as that in Economics?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	129
Difficulty Level	D
Avg. time spent on this question by students who got this question right	192
% of students who attempted this question	9.07
% of students who got the question right of those who attempted	1.69

[Video Solution](#)

[Text Solution](#)

Total marks scored by students of Class VI in Civics = $50 \times 32 = 1600$

Total marks scored by students of Class VI in Economics = $50 \times 26 = 1300$

If all the students scored the same mark in each of the two subjects, the two totals above must be equal.

To maximize the number of students who scored the same mark in each of the two subjects, we need to bring down the difference between these two numbers to zero (since the sum of the marks of each subject of all the students who scored the same mark in each of the two subjects will be the same).

The difference between the two totals = $1600 - 1300 = 300$

If one student scored 46 in Civics and 20 in Economics, this difference will reduce by 26.

To reduce the difference to 0, we need $300/26 = 11.53$, i.e., 12 students.

11 students could have scored 46 in Civics and 20 in Economics. The 12th student could have scored 46 and 32 in Civics and Economics.

The remaining 38 students must score 1048 in Civics and 1048 in Economics.

Each student has to score around 28 marks on average, which falls within the range of marks for each of the two subjects (we can accommodate the highest in Economics and lowest in Civics among these 38 students).

Hence, the maximum number of students who could have scored the same mark in both Civics and Economics is 38. Ans: (38)

undefined

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
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Q11. DIRECTIONS for questions 10 and 11: Type your answer in the text box provided below the question.

What is the maximum number of students from Class VI whose score in Civics was the same as that in Economics?

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	129
Difficulty Level	D
Avg. time spent on this question by students who got this question right	192

Time spent / Accuracy Analysis

% of students who attempted this question	9.07
% of students who got the question right of those who attempted	1.69

[Video Solution](#)[Text Solution](#)

Total marks scored by students of Class VI in Civics = $50 \times 32 = 1600$

Total marks scored by students of Class VI in Economics = $50 \times 26 = 1300$

If all the students scored the same mark in each of the two subjects, the two totals above must be equal.

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11 students could have scored 46 in Civics and 20 in Economics. The 12th student could have scored 46 and 32 in Civics and Economics.

The remaining 38 students must score 1048 in Civics and 1048 in Economics.

Each student has to score around 28 marks on average, which falls within the range of marks for each of the two subjects (we can accommodate the highest in Economics and lowest in Civics among these 38 students).

Hence, the maximum number of students who could have scored the same mark in both Civics and Economics is 38. Ans: (38)

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DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
VII	21	36	30	19	45	40

Q12. DIRECTIONS for questions 12 and 13: Select the correct alternative from the given choices.

If the number of students from Class VI whose score in Civics was the same as that in Economics is the maximum possible, what is the maximum number of students who scored 46 marks in Civics?

- a) 10
- b) 12
- c) 14
- d) 16

You did not answer this question

[Show Correct Answer](#)**Time spent / Accuracy Analysis**

Time taken by you to answer this question

12

Time spent / Accuracy Analysis

Avg. time spent on this question by all students	121
Difficulty Level	D
Avg. time spent on this question by students who got this question right	102
% of students who attempted this question	2.88
% of students who got the question right of those who attempted	32.94

[Video Solution](#)**Text Solution**

From the above solution, we can see that there are 12 students who scored 46 marks in Civics.

Of the remaining 38 students, no one can score 46 marks in Civics because all these 38 students must score the same mark in both Civics and Economics.

Hence, there can be a maximum of 12 students who scored 46 marks in Civics.

Choice (B)

undefined

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

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If the number of students from Class VI whose score in Civics was the same as that in Economics is the maximum possible, what is the maximum number of students who scored 46 marks in Civics?

- a) 10
- b) 12
- c) 14
- d) 16

You did not answer this question

[Show Correct Answer](#)**Time spent / Accuracy Analysis**

Time taken by you to answer this question	12
Avg. time spent on this question by all students	121
Difficulty Level	D
Avg. time spent on this question by students who got this question right	102
% of students who attempted this question	2.88
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[Video Solution](#)

Text Solution

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Of the remaining 38 students, no one can score 46 marks in Civics because all these 38 students must score the same mark in both Civics and Economics.

Hence, there can be a maximum of 12 students who scored 46 marks in Civics.

Choice (B)

undefined

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
VII	21	36	30	19	45	40

Q13. DIRECTIONS for questions 12 and 13: Select the correct alternative from the given choices.

For which class is it possible that the second highest mark scored by any student in one of the two subjects is lower than the second lowest mark scored by any student in the other subject?

- a) **Class VI**
- b) **Class VII**
- c) **Neither Class VI nor Class VII**
- d) **Both Class VI and Class VII**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	104
Difficulty Level	M
Avg. time spent on this question by students who got this question right	117
% of students who attempted this question	3.26
% of students who got the question right of those who attempted	31.01

Video Solution

Text Solution

The second highest mark will be the lowest possible for the subject with the lower average.

Hence, for Class VI, we can calculate the lowest possible second highest mark for Economics and highest possible second lowest mark for Civics.

Total marks scored in Economics = 1300

Removing the maximum and minimum scores, we are left with $1300 - 39 - 20 = 1241$
For 48 students to score 1241, they must average around 25.85.

If we assume all the 48 students scored only 25 and 26 marks, the lowest possible second highest mark for Economics is 26.

Total marks scored in Civics = 1600

Removing the maximum and minimum scores, we are left with $1600 - 25 - 46 = 1529$
For 48 students to score 1529, they must average around 31.85.

Hence, all the 48 students can score 31 or 32 marks. The highest possible second lowest mark for Civics is 31.

For Class VI, the given condition is satisfied.

For Class VII, we can calculate the lowest possible second highest mark for Civics and highest possible second lowest mark for Economics.

Lowest possible second highest mark for Civics will be $\frac{1500 - 21 - 36}{48} \cong 30$

Highest possible second lowest mark for Economics = $\frac{1600 - 45 - 19}{48} = 32$

Hence, for Class VII also, the given condition is satisfied.

Therefore, the condition is satisfied for both the classes.

Choice (D)

undefined

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

In a school, the students of two classes, Class VI and Class VII, wrote exams in two different subjects - Civics and Economics. Each class comprised exactly 50 students and all the students wrote each of the two exams. The table below provides, for each subject, the average marks of the students, the maximum marks scored by any student and the minimum marks scored by any student in each class.

Class	Civics			Economics		
	Min	Max	Ave	Min	Max	Ave
VI	25	46	32	20	39	26
VII	21	36	30	19	45	40

Q13. DIRECTIONS for questions 12 and 13: Select the correct alternative from the given choices.

For which class is it possible that the second highest mark scored by any student in one of the two subjects is lower than the second lowest mark scored by any student in the other subject?

- a) Class VI
- b) Class VII
- c) Neither Class VI nor Class VII
- d) Both Class VI and Class VII

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	104
Difficulty Level	M
Avg. time spent on this question by students who got this question right	117
% of students who attempted this question	3.26
% of students who got the question right of those who attempted	31.01

[Video Solution](#)

Text Solution

The second highest mark will be the lowest possible for the subject with the lower average.

Hence, for Class VI, we can calculate the lowest possible second highest mark for Economics and highest possible second lowest mark for Civics.

Total marks scored in Economics = 1300

Removing the maximum and minimum scores, we are left with $1300 - 39 - 20 = 1241$

For 48 students to score 1241, they must average around 25.85.

If we assume all the 48 students scored only 25 and 26 marks, the lowest possible second highest mark for Economics is 26.

Total marks scored in Civics = 1600

Removing the maximum and minimum scores, we are left with $1600 - 25 - 46 = 1529$

For 48 students to score 1529, they must average around 31.85.

Hence, all the 48 students can score 31 or 32 marks. The highest possible second lowest mark for Civics is 31.

For Class VI, the given condition is satisfied.

For Class VII, we can calculate the lowest possible second highest mark for Civics and highest possible second lowest mark for Economics.

Lowest possible second highest mark for Civics will be $\frac{1500 - 21 - 36}{48} \cong 30$

Highest possible second lowest mark for Economics = $\frac{1600 - 45 - 19}{48} = 32$

Hence, for Class VII also, the given condition is satisfied.

Therefore, the condition is satisfied for both the classes.

Choice (D)

undefined

Q14. DIRECTIONS for question 14: Select the correct alternative from the given choices.

Professor Theodore Bumblebee of IIM-A gave five assignments – I, II, III, IV and V – to five of his students – Super Subbu, Cunning Chetan, Lazy Laxman, Morose Mary and Reckless Rani, as part of a group assignment. The following table shows the times (in hours) taken by each of the students to complete the assignments:

Student	I	II	III	IV	V
Super Subbu	2	5	1.5	3	5
Cunning Chetan	4	2	3	1	4
Lazy Laxman	1	3	4	2	1.5
Morose Mary	1.5	2.5	3.5	3	3
Reckless Rani	5	4	3.5	2	4

In a group assignment, all the assignments given have to be completed and it is not necessary that every person does each and every assignment. Thus, this group arrives at a consensus and decides that each of them would do exactly one of the assignments.

What is the cumulative time spent by all the students in completing the group assignment, if they finish it in the least possible time?

- a) 8 hours
- b) 8.5 hours
- c) 10 hours

- d) **11.5 hours**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	253
Difficulty Level	D
Avg. time spent on this question by students who got this question right	256
% of students who attempted this question	34.3
% of students who got the question right of those who attempted	71.79

[Video Solution](#)

[**Text Solution**](#)

Five assignments are to be completed by five students with each doing exactly one of the assignments. By simple observation we can see that the fastest student Reckless Rani can complete any assignment in 2 hrs (for assignment IV). From this point let us try to minimize the time taken by the other four. This can be done when we assume that Super Subbu does assignment II, Lazy Laxman completes assignment V. Morose Mary completes assignment I and cunning Chetan does assignment III.

∴ Minimum time required is 2 hours.

Total time spent by all five is

$$2 + 1.5 + 1.5 + 1.5 + 2 = 8.5 \text{ hours.}$$

Hence, total time spent by all students together is 8.5 hours.

Choice (B)

undefined

Q14. DIRECTIONS for question 14: Select the correct alternative from the given choices.

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Cunning Chetan	4	2	3	1	4
Lazy Laxman	1	3	4	2	1.5
Morose Mary	1.5	2.5	3.5	3	3
Reckless Rani	5	4	3.5	2	4

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- a) **8 hours**
- b) **8.5 hours**
- c) **10 hours**
- d) **11.5 hours**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	253
Difficulty Level	D
Avg. time spent on this question by students who got this question right	256
% of students who attempted this question	34.3
% of students who got the question right of those who attempted	71.79

[Video Solution](#)

[Text Solution](#)

Five assignments are to be completed by five students with each doing exactly one of the assignments. By simple observation we can see that fastest that Reckless Rani can complete any assignment in 2 hrs (for assignment IV). From this point let us try to minimize the time taken by the other four. This can be done when we assume that Super Subbu does assignment II, Lazy Laxman completes assignment V. Morose Mary completes assignment I and cunning Chetan does assignment III.

∴ Minimum time required is 2 hours.

Total time spent by all five is

$2 + 1.5 + 1.5 + 1.5 + 2 = 8.5$ hours.

Hence, total time spent by all students together is 8.5 hours.

Choice (B)

undefined

DIRECTIONS for questions 15 to 18: Answer the questions on the basis of the information given below.

In a city, there are exactly five different malls - City Centre, Central, Central Square, City Square and Square Central. Each mall has a different restaurant among Eat Street, Eatery Bay, Bay Street, Streetfood and Food Bay. Further, each restaurant serves a different cuisine among Indian, Chinese, Italian, Mexican and French.

On a particular day, each of five persons, A through E, visited a different restaurant among the ones mentioned above. It is also known that

- i. Food Bay is in Central Square, while D visited City Square.
- ii. the restaurant that serves Indian cuisine was visited by B, while the Bay Street does not serve French cuisine.
- iii. E, who visited Eat Street, did not visit the restaurant that serves Mexican cuisine.
- iv. Square Central has the restaurant which serves French cuisine and this was visited by C.
- v. Streetfood, which is not in City Centre, serves Chinese cuisine and this was visited by A.

Q15. DIRECTIONS for questions 15 to 18: Select the correct alternative from the given choices.

Which mall did B visit?

a) City Centre

b) Central Square Your answer is correct

c) Central

d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	6
Avg. time spent on this question by all students	364
Difficulty Level	E
Avg. time spent on this question by students who got this question right	353
% of students who attempted this question	48.82
% of students who got the question right of those who attempted	90.57

[Video Solution](#)

[Text Solution](#)

From (i), D visited City Square. From (ii), B visited the restaurant that serves Indian cuisine.

From (iii), E visited Eat Street.

From (iv), C visited Square Central mall and had French cuisine.

From (v), A visited Streetfood, which serves Chinese.

Since A, B and C visited the restaurants that served Chinese, Indian and French cuisines respectively, E must have visited the restaurant that serves Mexican or Italian. From (iii), E could not have visited the restaurant that serves Mexican. Hence, E visited the restaurant that serves Italian, while D visited the restaurant that serves Mexican.

Also, A, C, D and E could not have visited Food Bay, which is in Central Square. Hence, B must have visited Food Bay.

From (v), Streetfood is not in City Centre. Hence, Streetfood must be in Central and Eat Street must be in City Centre.

From (ii), Baystreet does not serve French cuisine. Hence, Bay Street must serve Mexican cuisine and Eatery Bay must serve French cuisine.

The following table provides the distribution:

Person	Restaurant	Mall	Cuisine
A	Street Food	Central	Chinese
B	Food Bay	Central Square	Indian
C	Eatery Bay	Square Centre	French
D	Bay Street	City Square	Mexican
E	Eat Street	City Centre	Italian

B visited Central Square.

Choice (B)

undefined

undefined

undefined

DIRECTIONS for questions 15 to 18: Answer the questions on the basis of the information given below.

In a city, there are exactly five different malls - City Centre, Central, Central Square, City Square and Square Central. Each mall has a different restaurant among Eat Street, Eatery Bay, Bay Street, Streetfood and Food Bay. Further, each restaurant serves a different cuisine among Indian, Chinese, Italian, Mexican and French.

On a particular day, each of five persons, A through E, visited a different restaurant among the ones mentioned above. It is also known that

- i. Food Bay is in Central Square, while D visited City Square.
- ii. the restaurant that serves Indian cuisine was visited by B, while the Bay Street does not serve French cuisine.
- iii. E, who visited Eat Street, did not visit the restaurant that serves Mexican cuisine.
- iv. Square Central has the restaurant which serves French cuisine and this was visited by C.
- v. Streetfood, which is not in City Centre, serves Chinese cuisine and this was visited by A.

Q16. DIRECTIONS for questions 15 to 18: Select the correct alternative from the given choices.

Which cuisine does the restaurant that D visited serve?

- a) Mexican Your answer is correct
- b) Indian
- c) Italian
- d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	43
Difficulty Level	E
Avg. time spent on this question by students who got this question right	41
% of students who attempted this question	49.07
% of students who got the question right of those who attempted	94.05

[Video Solution](#)

[Text Solution](#)

From (i), D visited City Square. From (ii), B visited the restaurant that serves Indian cuisine.

From (iii), E visited Eat Street.

From (iv), C visited Square Central mall and had French cuisine.

From (v), A visited Streetfood, which serves Chinese.

Since A, B and C visited the restaurants that served Chinese, Indian and French cuisines respectively, E must have visited the restaurant that serves Mexican or Italian. From (iii), E could not have visited the restaurant that serves Mexican. Hence, E visited the restaurant that serves Italian, while D visited the restaurant that serves Mexican.

Also, A, C, D and E could not have visited Food Bay, which is in Central Square. Hence, B must have visited Food Bay.

From (v), Streetfood is not in City Centre. Hence, Streetfood must be in Central and Eat Street must be in City Centre.

From (ii), Baystreet does not serve French cuisine. Hence, Bay Street must serve Mexican cuisine and Eatery Bay must serve French cuisine.

The following table provides the distribution:

Person	Restaurant	Mall	Cuisine
A	Street Food	Central	Chinese
B	Food Bay	Central Square	Indian
C	Eatery Bay	Square Centre	French
D	Bay Street	City Square	Mexican
E	Eat Street	City Centre	Italian

D visited Bay Street, which serves Mexican cuisine.

Choice (A)

DIRECTIONS for questions 15 to 18: Answer the questions on the basis of the information given below.

In a city, there are exactly five different malls - City Centre, Central, Central Square, City Square and Square Central. Each mall has a different restaurant among Eat Street, Eatery Bay, Bay Street, Streetfood and Food Bay. Further, each restaurant serves a different cuisine among Indian, Chinese, Italian, Mexican and French.

On a particular day, each of five persons, A through E, visited a different restaurant among the ones mentioned above. It is also known that

i.

Food Bay is in Central Square, while D visited City Square.

ii.

the restaurant that serves Indian cuisine was visited by B, while the Bay Street does not serve French cuisine.

iii.

E, who visited Eat Street, did not visit the restaurant that serves Mexican cuisine.

iv.

Square Central has the restaurant which serves French cuisine and this was visited by C.

v.

Streetfood, which is not in City Centre, serves Chinese cuisine and this was visited by A.

Q16. DIRECTIONS for questions 15 to 18: Select the correct alternative from the given choices.

Which cuisine does the restaurant that D visited serve?

- a) Mexican Your answer is correct
- b) Indian
- c) Italian
- d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	43
Difficulty Level	E
Avg. time spent on this question by students who got this question right	41
% of students who attempted this question	49.07
% of students who got the question right of those who attempted	94.05

[Video Solution](#)

[Text Solution](#)

From (i), D visited City Square. From (ii), B visited the restaurant that serves Indian cuisine.

From (iii), E visited Eat Street.

From (iv), C visited Square Central mall and had French cuisine.

From (v), A visited Streetfood, which serves Chinese.

Since A, B and C visited the restaurants that served Chinese, Indian and French cuisines respectively, E must have visited the restaurant that serves Mexican or Italian. From (iii), E could not have visited the restaurant that serves Mexican. Hence, E visited the restaurant that serves Italian, while D visited the restaurant that serves Mexican.

Also, A, C, D and E could not have visited Food Bay, which is in Central Square. Hence, B must have visited Food Bay.

From (v), Streetfood is not in City Centre. Hence, Streetfood must be in Central and Eat Street must be in City Centre.

From (ii), Baystreet does not serve French cuisine. Hence, Bay Street must serve Mexican cuisine and Eatery Bay must serve French cuisine.

The following table provides the distribution:

Person	Restaurant	Mall	Cuisine
A	Street Food	Central	Chinese
B	Food Bay	Central Square	Indian
C	Eatery Bay	Square Centre	French
D	Bay Street	City Square	Mexican
E	Eat Street	City Centre	Italian

D visited Bay Street, which serves Mexican cuisine.

Choice (A)

DIRECTIONS for questions 15 to 18: Answer the questions on the basis of the information given below.

In a city, there are exactly five different malls - City Centre, Central, Central Square, City Square and Square Central. Each mall has a different restaurant among Eat Street, Eatery Bay, Bay Street, Streetfood and Food Bay. Further, each restaurant serves a different cuisine among Indian, Chinese, Italian, Mexican and French.

On a particular day, each of five persons, A through E, visited a different restaurant among the ones mentioned above. It is also known that

- i. Food Bay is in Central Square, while D visited City Square.
- ii. the restaurant that serves Indian cuisine was visited by B, while the Bay Street does not serve French cuisine.
- iii. E, who visited Eat Street, did not visit the restaurant that serves Mexican cuisine.
- iv. Square Central has the restaurant which serves French cuisine and this was visited by C.
- v. Streetfood, which is not in City Centre, serves Chinese cuisine and this was visited by A.

Q16. DIRECTIONS for questions 15 to 18: Select the correct alternative from the given choices.

Which cuisine does the restaurant that D visited serve?

- b) Indian
- c) Italian
- d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	43
Difficulty Level	E
Avg. time spent on this question by students who got this question right	41
% of students who attempted this question	49.07
% of students who got the question right of those who attempted	94.05

[Video Solution](#)

[Text Solution](#)

From (i), D visited City Square. From (ii), B visited the restaurant that serves Indian cuisine.

From (iii), E visited Eat Street.

From (iv), C visited Square Central mall and had French cuisine.

From (v), A visited Streetfood, which serves Chinese.

Since A, B and C visited the restaurants that served Chinese, Indian and French cuisines respectively, E must have visited the restaurant that serves Mexican or Italian. From (iii), E could not have visited the restaurant that serves Mexican. Hence, E visited the restaurant that serves Italian, while D visited the restaurant that serves Mexican.

Also, A, C, D and E could not have visited Food Bay, which is in Central Square. Hence, B must have visited Food Bay.

From (v), Streetfood is not in City Centre. Hence, Streetfood must be in Central and Eat Street must be in City Centre.

From (ii), Baystreet does not serve French cuisine. Hence, Bay Street must serve Mexican cuisine and Eatery Bay must serve French cuisine.

The following table provides the distribution:

Person	Restaurant	Mall	Cuisine
A	Street Food	Central	Chinese
B	Food Bay	Central Square	Indian
C	Eatery Bay	Square Centre	French
D	Bay Street	City Square	Mexican
E	Eat Street	City Centre	Italian

D visited Bay Street, which serves Mexican cuisine.

Choice (A)

undefined

DIRECTIONS for questions 15 to 18: Answer the questions on the basis of the information given below.

In a city, there are exactly five different malls - City Centre, Central, Central Square, City Square and Square Central. Each mall has a different restaurant among Eat Street, Eatery Bay, Bay Street, Streetfood and Food Bay. Further, each restaurant serves a different cuisine among Indian, Chinese, Italian, Mexican and French.

On a particular day, each of five persons, A through E, visited a different restaurant among the ones mentioned above. It is also known that

- i.
Food Bay is in Central Square, while D visited City Square.

- ii. the restaurant that serves Indian cuisine was visited by B, while the Bay Street does not serve French cuisine.
- iii. E, who visited Eat Street, did not visit the restaurant that serves Mexican cuisine.
- iv. Square Central has the restaurant which serves French cuisine and this was visited by C.
- v. Streetfood, which is not in City Centre, serves Chinese cuisine and this was visited by A.

Q17. DIRECTIONS for questions 15 to 18: Select the correct alternative from the given choices.

Who among the following visited Eatery Bay?

- a) **B**
- b) **D**
- c) **C** Your answer is correct
- d) **Cannot be determined**

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	67
Difficulty Level	E
Avg. time spent on this question by students who got this question right	62
% of students who attempted this question	48.16
% of students who got the question right of those who attempted	87.42

[Video Solution](#)

[Text Solution](#)

From (i), D visited City Square. From (ii), B visited the restaurant that serves Indian cuisine.

From (iii), E visited Eat Street.

From (iv), C visited Square Central mall and had French cuisine.

From (v), A visited Streetfood, which serves Chinese.

Since A, B and C visited the restaurants that served Chinese, Indian and French cuisines respectively, E must have visited the restaurant that serves Mexican or Italian. From (iii), E could not have visited the restaurant that serves Mexican. Hence, E visited the restaurant that serves Italian, while D visited the restaurant that serves Mexican.

Also, A, C, D and E could not have visited Food Bay, which is in Central Square. Hence, B must have visited Food Bay.

From (v), Streetfood is not in City Centre. Hence, Streetfood must be in Central and Eat Street must be in City Centre.

From (ii), Baystreet does not serve French cuisine. Hence, Bay Street must serve Mexican cuisine and Eatery Bay must serve French cuisine.

The following table provides the distribution:

Person	Restaurant	Mall	Cuisine
A	Street Food	Central	Chinese
B	Food Bay	Central Square	Indian
C	Eatery Bay	Square Centre	French
D	Bay Street	City Square	Mexican
E	Eat Street	City Centre	Italian

C visited Eatery Bay.

Choice (C)

undefined

DIRECTIONS for questions 15 to 18: Answer the questions on the basis of the information given below.

In a city, there are exactly five different malls - City Centre, Central, Central Square, City Square and Square Central. Each mall has a different restaurant among Eat Street, Eatery Bay, Bay Street, Streetfood and Food Bay. Further, each restaurant serves a different cuisine among Indian, Chinese, Italian, Mexican and French.

On a particular day, each of five persons, A through E, visited a different restaurant among the ones mentioned above. It is also known that

i.

Food Bay is in Central Square, while D visited City Square.

- ii. the restaurant that serves Indian cuisine was visited by B, while the Bay Street does not serve French cuisine.
- iii. E, who visited Eat Street, did not visit the restaurant that serves Mexican cuisine.
- iv. Square Central has the restaurant which serves French cuisine and this was visited by C.
- v. Streetfood, which is not in City Centre, serves Chinese cuisine and this was visited by A.

Q18. DIRECTIONS for questions 15 to 18: Select the correct alternative from the given choices.

Which cuisine does the restaurant in Central serve?

- a) **Indian**
- b) **Mexican**
- c) **Italian**
- d) **Chinese** Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	705
Avg. time spent on this question by all students	47
Difficulty Level	E
Avg. time spent on this question by students who got this question right	45
% of students who attempted this question	47.75
% of students who got the question right of those who attempted	87.51

[Video Solution](#)

[Text Solution](#)

From (i), D visited City Square. From (ii), B visited the restaurant that serves Indian cuisine.

From (iii), E visited Eat Street.

From (iv), C visited Square Central mall and had French cuisine.

From (v), A visited Streetfood, which serves Chinese.

Since A, B and C visited the restaurants that served Chinese, Indian and French cuisines respectively, E must have visited the restaurant that serves Mexican or Italian. From (iii), E could not have visited the restaurant that serves Mexican. Hence, E visited the restaurant that serves Italian, while D visited the restaurant that serves Mexican.

Also, A, C, D and E could not have visited Food Bay, which is in Central Square. Hence, B must have visited Food Bay.

From (v), Streetfood is not in City Centre. Hence, Streetfood must be in Central and Eat Street must be in City Centre.

From (ii), Baystreet does not serve French cuisine. Hence, Bay Street must serve Mexican cuisine and Eatery Bay must serve French cuisine.

The following table provides the distribution:

Person	Restaurant	Mall	Cuisine
A	Street Food	Central	Chinese
B	Food Bay	Central Square	Indian
C	Eatery Bay	Square Centre	French
D	Bay Street	City Square	Mexican
E	Eat Street	City Centre	Italian

The restaurant in Central serves Chinese cuisine.

Choice (D)

undefined

undefined

DIRECTIONS for questions 19 to 22: Answer the questions on the basis of the information given below.

Rahul and Kiran were playing a game in which Rahul distributes ten cards, numbered 1 through 10, equally between Kiran and him.

Rahul initially forms a stack with these ten cards, shuffles them four times, each time taking four cards which are exactly in the middle of the stack and placing them on top of the stack in the same order. He then distributes the stack of ten cards such that he first gives Kiran the top most card and then takes the next for himself; he gives the next card to Kiran and takes one for himself and so on until all the cards are distributed. After distributing all the cards, the person who has the card numbered 7 is declared the winner.

When Rahul initially formed a stack, the cards were present in the stack in the ascending order of their numbers, with card numbered 1 at the top and card numbered 10 at the bottom.

Q19. DIRECTIONS for questions 19 to 22: Select the correct alternative from the given choices.

For which of the following values of n will Rahul win?

- a) 7
- b) 9
- c) 11
- d) 14

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	37
Avg. time spent on this question by all students	267
Difficulty Level	M
Avg. time spent on this question by students who got this question right	281
% of students who attempted this question	18.12
% of students who got the question right of those who attempted	54.2

[Video Solution](#)

[Text Solution](#)

The cards are numbered 1 to 10. Depending on how many times Rahul shuffles the stack, the order of the cards will change.

The table below provides the arrangements of cards in the stack for different values of n . For each arrangement, the cells shaded in grey represent the cards with Kiran

$n = 0$	$n = 1$	$n = 2$	$n = 3$	$n = 4$	$n = 5$	$n = 6$	$n = 7$
1	4	7	3	6	2	5	1
2	5	1	4	7	3	6	2
3	6	2	5	1	4	7	3
4	7	3	6	2	5	1	4
5	1	4	7	3	6	2	5
6	2	5	1	4	7	3	6
7	3	6	2	5	1	4	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10

We can see that $n = 7$ is the same as $n = 0$ and the cycle will repeat from $n = 7$ onwards.

For $n = 11$, which is the same as $n = 4$, Rahul will win.

Choice (C)

DIRECTIONS for questions 19 to 22: Answer the questions on the basis of the information given below.

Rahul and Kiran were playing a game in which Rahul distributes ten cards, numbered 1 through 10, equally between Kiran and him.

Rahul initially forms a stack with these ten cards, shuffles them for times, each time taking four cards which are exactly in the middle of the stack and placing them on top of the stack in the same order. He then distributes the stack of ten cards such that he first gives Kiran the top most card and then takes the next for himself; he gives the next card to Kiran and takes one for himself and so on until all the cards are distributed. After distributing all the cards, the person who has the card numbered 7 is declared the winner.

When Rahul initially formed a stack, the cards were present in the stack in the ascending order of their numbers, with card numbered 1 at the top and card numbered 10 at the bottom.

Q19. DIRECTIONS for questions 19 to 22: Select the correct alternative from the given choices.

For which of the following values of n will Rahul win?

- a) 7
- b) 9
- c) 11
- d) 14

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	37
Avg. time spent on this question by all students	267
Difficulty Level	M
Avg. time spent on this question by students who got this question right	281
% of students who attempted this question	18.12
% of students who got the question right of those who attempted	54.2

[Video Solution](#)

[Text Solution](#)

The cards are numbered 1 to 10. Depending on how many times Rahul shuffles the stack, the order of the cards will change.

The table below provides the arrangements of cards in the stack for different values of n . For each arrangement, the cells shaded in grey represent the cards with Kiran

$n = 0$	$n = 1$	$n = 2$	$n = 3$	$n = 4$	$n = 5$	$n = 6$	$n = 7$
1	4	7	3	6	2	5	1
2	5	1	4	7	3	6	2
3	6	2	5	1	4	7	3
4	7	3	6	2	5	1	4
5	1	4	7	3	6	2	5
6	2	5	1	4	7	3	6
7	3	6	2	5	1	4	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10

We can see that $n = 7$ is the same as $n = 0$ and the cycle will repeat from $n = 7$ onwards.

For $n = 11$, which is the same as $n = 4$, Rahul will win.

Choice (C)

undefined

DIRECTIONS for questions 19 to 22: Answer the questions on the basis of the information given below.

Rahul and Kiran were playing a game in which Rahul distributes ten cards, numbered 1 through 10, equally between Kiran and him.

Rahul initially forms a stack with these ten cards, shuffles them four times, each time taking four cards which are exactly in the middle of the stack and placing them on top of the stack in the same order. He then distributes the stack of ten cards such that he first gives Kiran the top most card and then takes the next for himself; he gives the next card to Kiran and takes one for himself and so on until all the cards are distributed. After distributing all the cards, the person who has the card numbered 7 is declared the winner.

When Rahul initially formed a stack, the cards were present in the stack in the ascending order of their numbers, with card numbered 1 at the top and card numbered 10 at the bottom.

Q20. DIRECTIONS for questions 19 to 22: Select the correct alternative from the given choices.

Which of the following pair of cards can Rahul never have simultaneously?

- a) Card numbered 2 and card numbered 6
- b) Card numbered 2 and card numbered 5
- c) Card numbered 1 and card numbered 7
- d) Card numbered 7 and card numbered 8

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	195
Avg. time spent on this question by all students	115
Difficulty Level	M
Avg. time spent on this question by students who got this question right	116
% of students who attempted this question	17.05
% of students who got the question right of those who attempted	81.79

[Video Solution](#)

[Text Solution](#)

The cards are numbered 1 to 10. Depending on how many times Rahul shuffles the stack, the order of the cards will change.

The table below provides the arrangements of cards in the stack for different values of n . For each arrangement, the cells shaded in grey represent the cards with Kiran

$n = 0$	$n = 1$	$n = 2$	$n = 3$	$n = 4$	$n = 5$	$n = 6$	$n = 7$
1	4	7	3	6	2	5	1
2	5	1	4	7	3	6	2
3	6	2	5	1	4	7	3
4	7	3	6	2	5	1	4
5	1	4	7	3	6	2	5
6	2	5	1	4	7	3	6
7	3	6	2	5	1	4	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10

We can see that $n = 7$ is the same as $n = 0$ and the cycle will repeat from $n = 7$ onwards.

Rahul cannot have card numbered 1 and card numbered 7 simultaneously.

Choice (C)

undefined

DIRECTIONS for questions 19 to 22: Answer the questions on the basis of the information given below.

Rahul and Kiran were playing a game in which Rahul distributes ten cards, numbered 1 through 10, equally between Kiran and him.

Rahul initially forms a stack with these ten cards, shuffles them for n times, each time taking four cards which are exactly in the middle of the stack and placing them on top of the stack in the same order. He then distributes the stack of ten cards such that he first gives Kiran the top most card and then takes the next for himself; he gives the next card to Kiran and takes one for himself and so on until all the cards are distributed. After distributing all the cards, the person who has the card numbered 7 is declared the winner.

When Rahul initially formed a stack, the cards were present in the stack in the ascending order of their numbers, with card numbered 1 at the top and card numbered 10 at the bottom.

Q21. DIRECTIONS for questions 19 to 22: Select the correct alternative from the given choices.

If Kiran has two cards with consecutive numbers but was not the winner of the game, then which of the following will Rahul definitely not have?

- a) Card numbered 3
- b) Card numbered 6
- c) Card numbered 5
- d) Card numbered 4

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	303
Avg. time spent on this question by all students	156
Difficulty Level	M
Avg. time spent on this question by students who got this question right	164
% of students who attempted this question	13.27
% of students who got the question right of those who attempted	69.64

[Video Solution](#)

Text Solution

The cards are numbered 1 to 10. Depending on how many times Rahul shuffles the stack, the order of the cards will change.

The table below provides the arrangements of cards in the stack for different values of n . For each arrangement, the cells shaded in grey represent the cards with Kiran

$n = 0$	$n = 1$	$n = 2$	$n = 3$	$n = 4$	$n = 5$	$n = 6$	$n = 7$
1	4	7	3	6	2	5	1
2	5	1	4	7	3	6	2
3	6	2	5	1	4	7	3
4	7	3	6	2	5	1	4
5	1	4	7	3	6	2	5
6	2	5	1	4	7	3	6
7	3	6	2	5	1	4	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10

We can see that $n = 7$ is the same as $n = 0$ and the cycle will repeat from $n = 7$ onwards.

Kiran was not the winner of the game for $n = 1, 4 and }5.$

In each of these cases, Kiran has two cards with consecutive numbers and in each of these cases, Kiran has the card numbered 6.

Hence, Rahul will not have the card numbered 6.

Choice (B)

undefined

DIRECTIONS for questions 19 to 22: Answer the questions on the basis of the information given below.

Rahul and Kiran were playing a game in which Rahul distributes ten cards, numbered 1 through 10, equally between Kiran and him.

Rahul initially forms a stack with these ten cards, shuffles them four times, each time taking four cards which are exactly in the middle of the stack and placing them on top of the stack in the same order. He then distributes the stack of ten cards such that he first gives Kiran the top most card and then takes the next for himself; he gives the next card to Kiran and takes one for himself and so on until all the cards are distributed. After distributing all the cards, the person who has the card numbered 7 is declared the winner.

When Rahul initially formed a stack, the cards were present in the stack in the ascending order of their numbers, with card numbered 1 at the top and card numbered 10 at the bottom.

Q22. DIRECTIONS for questions 19 to 22: Select the correct alternative from the given choices.

If the sum of the cards that Kiran has is the lowest possible, which of the following cards will Rahul have?

- a) Card numbered 3
- b) Card numbered 6
- c) Card numbered 2
- d) Card numbered 4

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	354
Avg. time spent on this question by all students	107
Difficulty Level	M
Avg. time spent on this question by students who got this question right	111
% of students who attempted this question	12.71
% of students who got the question right of those who attempted	78.39

[Video Solution](#)

[Text Solution](#)

The cards are numbered 1 to 10. Depending on how many times Rahul shuffles the stack, the order of the cards will change.

The table below provides the arrangements of cards in the stack for different values of n . For each arrangement, the cells shaded in grey represent the cards with Kiran

$n = 0$	$n = 1$	$n = 2$	$n = 3$	$n = 4$	$n = 5$	$n = 6$	$n = 7$
1	4	7	3	6	2	5	1
2	5	1	4	7	3	6	2
3	6	2	5	1	4	7	3
4	7	3	6	2	5	1	4
5	1	4	7	3	6	2	5
6	2	5	1	4	7	3	6
7	3	6	2	5	1	4	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10

We can see that $n = 7$ is the same as $n = 0$ and the cycle will repeat from $n = 7$ onwards.

The sum of the cards that Kiran has is the lowest possible for $n = 5$.

Hence, Rahul will have cards numbered 3, 5, 7, 8, 10. From the given options, the answer is option A.

undefined

Q23. DIRECTIONS for question 23: Select the correct alternative from the given choices.

At a multiplex, the following six movies are scheduled as shown in the table given below:

No.	Movie	Duration	Show times
1	BATMAN	2 hrs	9:00 a.m. and 7:00 p.m.
2	SPIDERMAN	2 hrs	12:00 noon and 2:00 p.m.
3	HE-MAN	1 hr	11:00 a.m. and 1:00 p.m.
4	JAMES BOND	2 hrs	11:00 a.m. and 1:00 p.m.
5	SHAKTIMAN	2 hrs	10:00 a.m., 3:00 p.m. and 7:00 p.m.
6	SUPERMAN	1 hr	1:00 p.m. and 6:00 p.m.

You wish to see all the movies in a single day. If you need to have a break from 4:00 p.m. to 6:00 p.m., then which of the following is true?

- a) Batman is viewed first, He-man is viewed third and Superman is viewed last.
- b) Batman is viewed first, He-man is viewed third and Spiderman is viewed fourth. Your answer is correct
- c) James Bond is viewed third, Shaktiman is viewed fourth and Superman is viewed fifth.
- d) None of the above

Time spent / Accuracy Analysis

Time taken by you to answer this question 144

Avg. time spent on this question by all students 228

Difficulty Level M

Avg. time spent on this question by students who got this question right 228

% of students who attempted this question 38.51

% of students who got the question right of those who attempted 73.37

[Video Solution](#)

Text Solution

In order to see all the movies and to make sure you have a break between 4:00 p.m. and 6:00 p.m. the schedules to be followed is

1. BATMAN – 9:00 a.m. to 11:00 a.m.
2. JAMES BOND – 11:00 a.m. to 1:00 p.m.
3. HE-MAN – 1:00 p.m. to 2:00 p.m.
4. SPIDERMAN – 2:00 p.m. to 4:00 p.m.
5. SUPERMAN – 6:00 p.m. to 7:00 p.m.
6. SHAKTIMAN – 7:00 p.m. to 9:00 p.m.

Choice (B)

undefined

DIRECTIONS for questions 24 to 27: Answer the questions on the basis of the information given below.

Five teams - A through E - participated in a hockey tournament in which each team played against each of the other teams exactly once. In any match, the winning team is awarded four points and the losing team no points. In case of a draw, the two teams are awarded one point each.

At the end of the tournament, B had two points more than E, which, in turn, had two points more than A, which, in turn, had one point less than D, which, in turn, had three points more than C.

Q24. DIRECTIONS for questions 24 and 25: Type your answer in the text box provided below the question.

How many matches did C draw?

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	210
Avg. time spent on this question by all students	348
Difficulty Level	M
Avg. time spent on this question by students who got this question right	393
% of students who attempted this question	25.34
% of students who got the question right of those who attempted	43.95

[Video Solution](#)

Text Solution

Let the number of points that C was awarded be x .
The number of points that D was awarded will be $x + 3$.
The number of points that A was awarded will be $x + 2$.
The number of points that E was awarded will be $x + 4$.
The number of points that B was awarded will be $x + 6$.
Hence, the total number of points that the five teams were awarded = $5x + 15$.
In the tournament, 10 matches would have been played (since 5 teams played against each other exactly once).
Further, for every match that ended as a draw, two points will be given in total to the two teams that played the match. For each match that did not end as a draw, 4 points will be given in total.
If all the ten matches ended as draws, 20 points will be awarded to all the five teams combined.
If only 9 matches ended as draws, 22 points will be awarded to all the five teams combined.
Hence, we can see that the points in the tournament can only be 20, 22, 24, 26 and so on. The maximum number of points in the tournament can be 40.
Since the total number of points in the tournament is of the form $5x + 15$, the total number of points in the tournament can only be 20 or 30 or 40.
However, if there were 20 points, then all the matches must have ended as draws and all the teams would have equal number of points. Since this is not the case, the total points cannot be 20.
If there were 40 points, then all the matches must have had a result. In this case, the difference in points between any two teams must only be in multiples of 4 (since there were no draws). As this is not the case, the total points cannot be 40 as well.
Hence, the total number of points must be 30 and $x = 3$.
The points scored by A, B, C, D and E must be 5, 9, 3, 6 and 7 respectively.
A must have had 1 win, 1 draw and 2 losses.
B must have had 2 wins, 1 draw and 1 loss.
C must have had 3 draws and 1 loss.
D must have had 1 win, 2 draws and 1 loss.
E must have had 1 win and 3 draws.

C drew 3 matches.

Ans: (3)

undefined

DIRECTIONS for questions 24 to 27: Answer the questions on the basis of the information given below.

Five teams - A through E - participated in a hockey tournament in which each team played against each of the other teams exactly once. In any match, the winning team is awarded four points and the losing team no points. In case of a draw, the two teams are awarded one point each.

At the end of the tournament, B had two points more than E, which, in turn, had two points more than A, which, in turn, had one point less than D, which, in turn, had three points more than C.

Q25. DIRECTIONS for questions 24 and 25: Type your answer in the text box provided below the question.

How many matches did B win?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	166
Avg. time spent on this question by all students	90
Difficulty Level	M
Avg. time spent on this question by students who got this question right	97
% of students who attempted this question	25.39
% of students who got the question right of those who attempted	64.13

[Video Solution](#)

[Text Solution](#)

Let the number of points that C was awarded be x .

The number of points that D was awarded will be $x + 3$.

The number of points that A was awarded will be $x + 2$.

The number of points that E was awarded will be $x + 4$.

The number of points that B was awarded will be $x + 6$.

Hence, the total number of points that the five teams were awarded = $5x + 15$.

In the tournament, 10 matches would have been played (since 5 teams played against each other exactly once).

Further, for every match that ended as a draw, two points will be given in total to the two teams that played the match. For each match that did not end as a draw, 4 points will be given in total.

If all the ten matches ended as draws, 20 points will be awarded to all the five teams combined.

If only 9 matches ended as draws, 22 points will be awarded to all the five teams combined.

Hence, we can see that the points in the tournament can only be 20, 22, 24, 26 and so on. The maximum number of points in the tournament can be 40.

Since the total number of points in the tournament is of the form $5x + 15$, the total number of points in the tournament can only be 20 or 30 or 40.

However, if there were 20 points, then all the matches must have ended as draws and all the teams would have equal number of points. Since this is not the case, the total points cannot be 20.

If there were 40 points, then all the matches must have had a result. In this case, the difference in points between any two teams must only be in multiples of 4 (since there were no draws). As this is not the case, the total points cannot be 40 as well.

Hence, the total number of points must be 30 and $x = 3$.

The points scored by A, B, C, D and E must be 5, 9, 3, 6 and 7 respectively.

A must have had 1 win, 1 draw and 2 losses.

B must have had 2 wins, 1 draw and 1 loss.

C must have had 3 draws and 1 loss.

D must have had 1 win, 2 draws and 1 loss.

E must have had 1 win and 3 draws.

B won 2 matches.

Ans: (2)

undefined

DIRECTIONS for questions 24 to 27: Answer the questions on the basis of the information given below.

Five teams - A through E - participated in a hockey tournament in which each team played against each of the other teams exactly once. In any match, the winning team is awarded four points and the losing team no points. In case of a draw, the two teams are awarded one point each.

At the end of the tournament, B had two points more than E, which, in turn, had two points more than A, which, in turn, had one point less than D, which, in turn, had three points more than C.

Q26. DIRECTIONS for questions 26 and 27: Select the correct alternative from the given choices.

What is the result of the match between C and D?

- a) **C won**
- b) **D won**
- c) **Draw**
- d) **Cannot be determined**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	304
Avg. time spent on this question by all students	86
Difficulty Level	D
Avg. time spent on this question by students who got this question right	92
% of students who attempted this question	15.76
% of students who got the question right of those who attempted	44.21

[Video Solution](#)

[Text Solution](#)

Let the number of points that C was awarded be x .

The number of points that D was awarded will be $x + 3$.

The number of points that A was awarded will be $x + 2$.

The number of points that E was awarded will be $x + 4$.

The number of points that B was awarded will be $x + 6$.

Hence, the total number of points that the five teams were awarded = $5x + 15$.

In the tournament, 10 matches would have been played (since 5 teams played against each other exactly once).

Further, for every match that ended as a draw, two points will be given in total to the two teams that played the match. For each match that did not end as a draw, 4 points will be given in total.

If all the ten matches ended as draws, 20 points will be awarded to all the five teams combined.

If only 9 matches ended as draws, 22 points will be awarded to all the five teams combined.

Hence, we can see that the points in the tournament can only be 20, 22, 24, 26 and so on. The maximum number of points in the tournament can be 40.

Since the total number of points in the tournament is of the form $5x + 15$, the total number of points in the tournament can only be 20 or 30 or 40.

However, if there were 20 points, then all the matches must have ended as draws and all the teams would have equal number of points. Since this is not the case, the total points cannot be 20.

If there were 40 points, then all the matches must have had a result. In this case, the difference in points between any two teams must only be in multiples of 4 (since there were no draws). As this is not the case, the total points cannot be 40 as well.

Hence, the total number of points must be 30 and $x = 3$.

The points scored by A, B, C, D and E must be 5, 9, 3, 6 and 7 respectively.

A must have had 1 win, 1 draw and 2 losses.

B must have had 2 wins, 1 draw and 1 loss.

C must have had 3 draws and 1 loss.

D must have had 1 win, 2 draws and 1 loss.

E must have had 1 win and 3 draws.

C has 3 draws. If C did not draw against D, C must have drawn against A, B and E. In this case, E will be left with 2 draws and D will also be left with 2 draws and none of the other teams will have any draws left. However, E and D could not have played against each other twice. Hence, C and D must have ended as a draw.

Choice (C)

undefined

DIRECTIONS for questions 24 to 27. Answer the questions on the basis of the information given below.

Five teams - A through E - participated in a hockey tournament in which each team played against each of the other teams exactly once. In any match, the winning team is awarded four points and the losing team no points. In case of a draw, the two teams are awarded one point each.

At the end of the tournament, B had two points more than E, which, in turn, had two points more than A, which, in turn, had one point less than D, which, in turn, had three points more than C.

Q27. DIRECTIONS for questions 26 and 27: Select the correct alternative from the given choices.

If E drew the match against A, which of the following teams won against D?

- a) **B**
- b) **A**
- c) **E**
- d) **Cannot be determined**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	148
Avg. time spent on this question by all students	123
Difficulty Level	D
Avg. time spent on this question by students who got this question right	134
% of students who attempted this question	10.22
% of students who got the question right of those who attempted	53.34

[Video Solution](#)

[Text Solution](#)

Let the number of points that C was awarded be x .
The number of points that D was awarded will be $x + 3$.
The number of points that A was awarded will be $x + 2$.
The number of points that E was awarded will be $x + 4$.
The number of points that B was awarded will be $x + 6$.
Hence, the total number of points that the five teams were awarded = $5x + 15$.
In the tournament, 10 matches would have been played (since 5 teams played against each other exactly once).
Further, for every match that ended as a draw, two points will be given in total to the two teams that played the match. For each match that did not end as a draw, 4 points will be given in total.
If all the ten matches ended as draws, 20 points will be awarded to all the five teams combined.
If only 9 matches ended as draws, 22 points will be awarded to all the five teams combined.
Hence, we can see that the points in the tournament can only be 20, 22, 24, 26 and so on. The maximum number of points in the tournament can be 40.
Since the total number of points in the tournament is of the form $5x + 15$, the total number of points in the tournament can only be 20 or 30 or 40.
However, if there were 20 points, then all the matches must have ended as draws and all the teams would have equal number of points. Since this is not the case, the total points cannot be 20.
If there were 40 points, then all the matches must have had a result. In this case, the difference in points between any two teams must only be in multiples of 4 (since there were no draws). As this is not the case, the total points cannot be 40 as well.
Hence, the total number of points must be 30 and $x = 3$.
The points scored by A, B, C, D and E must be 5, 9, 3, 6 and 7 respectively.
A must have had 1 win, 1 draw and 2 losses.
B must have had 2 wins, 1 draw and 1 loss.
C must have had 3 draws and 1 loss.
D must have had 1 win, 2 draws and 1 loss.
E must have had 1 win and 3 draws.

Given that E drew the match against A.
A has only one draw. Hence, all the other matches of A must have had a result.
In the match between A and C, A must have won (since C did not win any match and could not have drawn against A).
Since A won against C, C must have drawn against B, D and E.
Since B has only one draw and this is against C, in the match between B and E, E must have won (since E did not lose any match).
Since E won against B, it must have drawn against C and D. Further, since B lost against E, it must have won against A and D. Since D has 1 win, D must have won against A.
Hence, B won against D.

Choice (A)

undefined

DIRECTIONS for questions 24 to 27: Answer the questions on the basis of the information given below.

Five teams - A through E - participated in a hockey tournament in which each team played against each of the other teams exactly once. In any match, the winning team is awarded four points and the losing team no points. In case of a draw, the two teams are awarded one point each.

At the end of the tournament, B had two points more than E, which, in turn, had two points more than A, which, in turn, had one point less than D, which, in turn, had three points more than C.

Q27. DIRECTIONS for questions 26 and 27: Select the correct alternative from the given choices.

If E drew the match against A, which of the following teams won against D?

a) B

b) A

c) E

d) Cannot be determined

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	148
Avg. time spent on this question by all students	123
Difficulty Level	D
Avg. time spent on this question by students who got this question right	134
% of students who attempted this question	10.22
% of students who got the question right of those who attempted	53.34

[Video Solution](#)

[Text Solution](#)

Let the number of points that C was awarded be x .

The number of points that D was awarded will be $x + 3$.

The number of points that A was awarded will be $x + 2$.

The number of points that E was awarded will be $x + 4$.

The number of points that B was awarded will be $x + 6$.

Hence, the total number of points that the five teams were awarded = $5x + 15$.

In the tournament, 10 matches would have been played (since 5 teams played against each other exactly once).

Further, for every match that ended as a draw, two points will be given in total to the two teams that played the match. For each match that did not end as a draw, 4 points will be given in total.

If all the ten matches ended as draws, 20 points will be awarded to all the five teams combined.

If only 9 matches ended as draws, 22 points will be awarded to all the five teams combined.

Hence, we can see that the points in the tournament can only be 20, 22, 24, 26 and so on. The maximum number of points in the tournament can be 40.

Since the total number of points in the tournament is of the form $5x + 15$, the total number of points in the tournament can only be 20 or 30 or 40.

However, if there were 20 points, then all the matches must have ended as draws and all the teams would have equal number of points. Since this is not the case, the total points cannot be 20.

If there were 40 points, then all the matches must have had a result. In this case, the difference in points between any two teams must only be in multiples of 4 (since there were no draws). As this is not the case, the total points cannot be 40 as well.

Hence, the total number of points must be 30 and $x = 3$.

The points scored by A, B, C, D and E must be 5, 9, 3, 6 and 7 respectively.

A must have had 1 win, 1 draw and 2 losses.

B must have had 2 wins, 1 draw and 1 loss.

C must have had 3 draws and 1 loss.

D must have had 1 win, 2 draws and 1 loss.

E must have had 1 win and 3 draws.

Given that E drew the match against A.

A has only one draw. Hence, all the other matches of A must have had a result.

In the match between A and C, A must have won (since C did not win any match and could not have drawn against A).

Since A won against C, C must have drawn against B, D and E.

Since B has only one draw and this is against C, in the match between B and E, E must have won (since E did not lose any match).

Since E won against B, it must have drawn against C and D. Further, since B lost against E, it must have won against A and D. Since D has 1 win, D must have won against A.

Hence, B won against D.

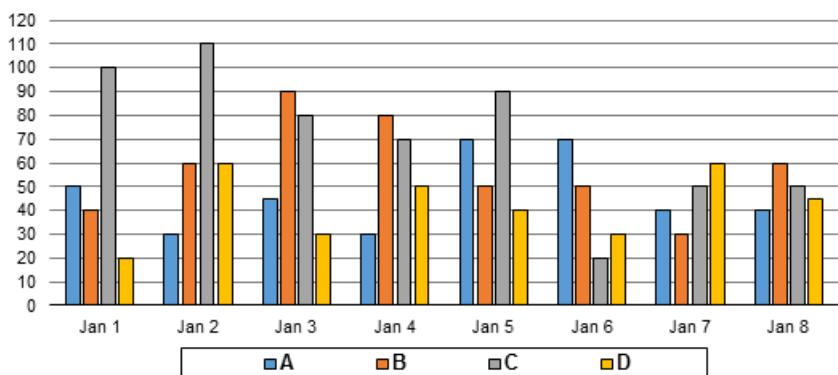
Choice (A)

DIRECTIONS for questions 28 to 31: Answer the questions on the basis of the information given below.

On January 1st, Rahul invested Rs.4000 to purchase the shares of exactly four companies, A, B, C and D, such that he purchased shares worth Rs.1000 of each company. From January 2nd to January 8th, at the beginning of each day, he sold all the shares of the company whose share price was the highest, and then purchased, with the money that he had, as many shares as possible of the company whose share price was the lowest. If, on any day, he did not have any shares of the company whose share price was the highest (among the four companies), he did not sell any shares on that day. While purchasing any shares, Rahul used the maximum possible amount of money available with him and carried forward any amount left unused to the next day.

During the given period, he did not invest any additional amount for purchasing shares and he spent all the money that he obtained from selling any share only for purchasing shares. He sells or purchases any shares only at the beginning of the day.

The following graph provides the price of a share of each of the four companies at the beginning of each of the eight days:



Note: The number of shares purchased or sold can only be integers.

Q28. DIRECTIONS for questions 28 and 29: Type your answer in the text box provided below the question.

How many shares of B did Rahul have at the end of the eighth day?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	25
Avg. time spent on this question by all students	412
Difficulty Level	E
Avg. time spent on this question by students who got this question right	481
% of students who attempted this question	12.43
% of students who got the question right of those who attempted	68.77

[Video Solution](#)

[Text Solution](#)

On Day 1, Rahul had 20 shares of A, 25 shares of B, 10 shares of C and 50 shares of D.

On Day 2, Rahul would have sold all the shares of C and purchased shares of A.

Amount from sale of shares of C = $110 \times 10 = 1100$

Number of shares of A purchased = $1100/30 = 36$

He will have ₹20 left on this day.

On Day 3, Rahul would have sold all the shares of B and purchased shares of D.

Amount from sales of shares of B = $25 \times 90 = 2250$

Total amount with him will be 2270.

Number of shares of D purchased = $2270/30 = 75$

He will have ₹20 left on this day.

On Day 4, Rahul would have sold all the shares of B and purchased shares of A.

However, Rahul does not have any shares of B left.

Total amount with him will be 20.

He cannot purchase any shares of A on this day.

He will have ₹20 left on this day.

On Day 5, Rahul would have sold all the shares of C and purchased shares of D.

However, Rahul does not have any shares of C.

Hence, he cannot purchase or sell any shares on this day.

On Day 6, Rahul would have sold all the shares of A and purchased shares of C.

Amount from sale of shares of A = $56 \times 70 = 3920$

Total amount with him = 3940

Number of shares of C purchased = $3940/20 = 197$

He will not have any amount left on this day.

On Day 7, Rahul would have sold all the shares of D and purchased shares of B.

Amount from sale of shares of D = $125 \times 60 = 7500$

Number of shares of B purchased = $7500/30 = 250$

On Day 8, Rahul would have sold all the shares of B and purchased shares of A.

Amount from sale of shares of B = $250 \times 60 = 15000$

Number of shares of A purchased = $15000/40 = 375$

The following table provides the number of shares that Rahul had on each day, after he made the sale and purchase:

Day	1	2	3	4	5	6	7	8
A	20	56	56	56	56	0	0	375
B	25	25	0	0	0	0	250	0
C	10	0	0	0	0	197	197	197
D	50	50	125	125	125	125	0	0

Rahul had no shares of B at the end of the eighth day.

Ans: (0)

undefined

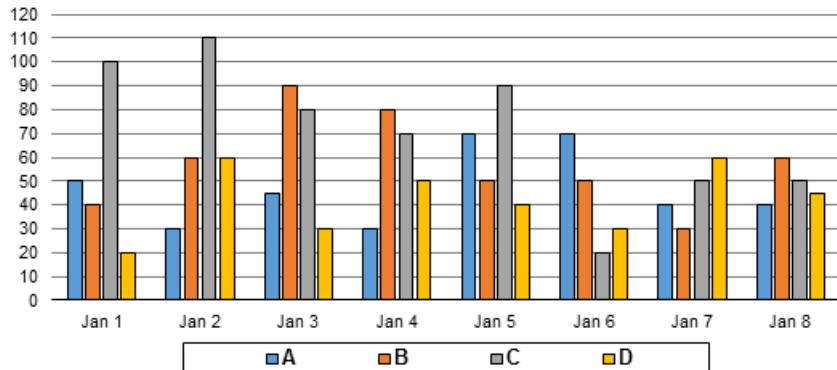
DIRECTIONS for questions 28 to 31: Answer the questions on the basis of the information given below.

On January 1st, Rahul invested Rs.4000 to purchase the shares of exactly four companies, A, B, C and D, such that he purchased shares worth Rs.1000 of each company. From January 2nd to January 8th, at the beginning of each day, he sold all the shares of the company whose share price was the highest, and then purchased, with the money that he had, as many shares as possible of the company whose share price was the lowest. If, on any day, he did not have any shares of the

company whose share price was the highest (among the four companies), he did not sell any shares on that day. While purchasing any shares, Rahul used the maximum possible amount of money available with him and carried forward any amount left unused to the next day.

During the given period, he did not invest any additional amount for purchasing shares and he spent all the money that he obtained from selling any share only for purchasing shares. He sells or purchases any shares only at the beginning of the day.

The following graph provides the price of a share of each of the four companies at the beginning of each of the eight days:



Note: The number of shares purchased or sold can only be integers.

Q29. DIRECTIONS for questions 28 and 29: Type your answer in the text box provided below the question.

What is the maximum number of shares that Rahul sold on any day?

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	11
Avg. time spent on this question by all students	105
Difficulty Level	E
Avg. time spent on this question by students who got this question right	107
% of students who attempted this question	13.31
% of students who got the question right of those who attempted	41.69

[Video Solution](#)

[Text Solution](#)

On Day 1, Rahul had 20 shares of A, 25 shares of B, 10 shares of C and 50 shares of D.

On Day 2, Rahul would have sold all the shares of C and purchased shares of A.

Amount from sale of shares of C = $110 \times 10 = 1100$

Number of shares of A purchased = $1100/30 = 36$

He will have ₹20 left on this day.

On Day 3, Rahul would have sold all the shares of B and purchased shares of D.

Amount from sales of shares of B = $25 \times 90 = 2250$

Total amount with him will be 2270.

Number of shares of D purchased = $2270/30 = 75$

He will have ₹20 left on this day.

On Day 4, Rahul would have sold all the shares of B and purchased shares of A.

However, Rahul does not have any shares of B left.

Total amount with him will be 20.

He cannot purchase any shares of A on this day.

He will have ₹20 left on this day.

On Day 5, Rahul would have sold all the shares of C and purchased shares of D.

However, Rahul does not have any shares of C.

Hence, he cannot purchase or sell any shares on this day.

On Day 6, Rahul would have sold all the shares of A and purchased shares of C.

Amount from sale of shares of A = $56 \times 70 = 3920$

Total amount with him = 3940

Number of shares of C purchased = $3940/20 = 197$

He will not have any amount left on this day.

On Day 7, Rahul would have sold all the shares of D and purchased shares of B.

Amount from sale of shares of D = $125 \times 60 = 7500$

Number of shares of B purchased = $7500/30 = 250$

On Day 8, Rahul would have sold all the shares of B and purchased shares of A.

Amount from sale of shares of B = $250 \times 60 = 15000$

Number of shares of A purchased = $15000/40 = 375$

The following table provides the number of shares that Rahul had on each day, after he made the sale and purchase:

Day	1	2	3	4	5	6	7	8
A	20	56	56	56	56	0	0	375
B	25	25	0	0	0	0	250	0
C	10	0	0	0	0	197	197	197
D	50	50	125	125	125	125	0	0

The maximum number of shares that Rahul sold on any day is 250.

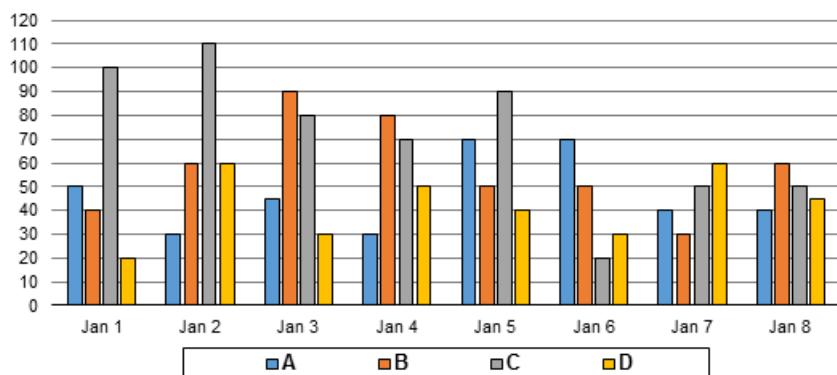
Ans: (250)

DIRECTIONS for questions 28 to 31: Answer the questions on the basis of the information given below.

On January 1st, Rahul invested Rs.4000 to purchase the shares of exactly four companies, A, B, C and D, such that he purchased shares worth Rs.1000 of each company. From January 2nd to January 8th, at the beginning of each day, he sold all the shares of the company whose share price was the highest, and then purchased, with the money that he had, as many shares as possible of the company whose share price was the lowest. If, on any day, he did not have any shares of the company whose share price was the highest (among the four companies), he did not sell any shares on that day. While purchasing any shares, Rahul used the maximum possible amount of money available with him and carried forward any amount left unused to the next day.

During the given period, he did not invest any additional amount for purchasing shares and he spent all the money that he obtained from selling any share only for purchasing shares. He sells or purchases any shares only at the beginning of the day.

The following graph provides the price of a share of each of the four companies at the beginning of each of the eight days:



Note: The number of shares purchased or sold can only be integers.

Q30. DIRECTIONS for questions 30 and 31: Select the correct alternative from the given choices.

The difference in the total number of shares that Rahul had on any two consecutive days was at most

- a) 141
- b) 125
- c) 150
- d) None of the above

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	82
Avg. time spent on this question by all students	107
Difficulty Level	E
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	8.53
% of students who got the question right of those who attempted	44.3

[Video Solution](#)

[Text Solution](#)

On Day 1, Rahul had 20 shares of A, 25 shares of B, 10 shares of C and 50 shares of D.

On Day 2, Rahul would have sold all the shares of C and purchased shares of A.

Amount from sale of shares of C = $110 \times 10 = 1100$

Number of shares of A purchased = $1100/30 = 36$

He will have ₹20 left on this day.

On Day 3, Rahul would have sold all the shares of B and purchased shares of D.

Amount from sales of shares of B = $25 \times 90 = 2250$

Total amount with him will be 2270.

Number of shares of D purchased = $2270/30 = 75$

He will have ₹20 left on this day.

On Day 4, Rahul would have sold all the shares of B and purchased shares of A.

However, Rahul does not have any shares of B left.

Total amount with him will be 20.

He cannot purchase any shares of A on this day.

He will have ₹20 left on this day.

On Day 5, Rahul would have sold all the shares of C and purchased shares of D.

However, Rahul does not have any shares of C.

Hence, he cannot purchase or sell any shares on this day.

On Day 6, Rahul would have sold all the shares of A and purchased shares of C.

Amount from sale of shares of A = $56 \times 70 = 3920$

Total amount with him = 3940

Number of shares of C purchased = $3940/20 = 197$

He will not have any amount left on this day.

On Day 7, Rahul would have sold all the shares of D and purchased shares of B.

Amount from sale of shares of D = $125 \times 60 = 7500$

Number of shares of B purchased = $7500/30 = 250$

On Day 8, Rahul would have sold all the shares of B and purchased shares of A.

Amount from sale of shares of B = $250 \times 60 = 15000$

Number of shares of A purchased = $15000/40 = 375$

The following table provides the number of shares that Rahul had on each day, after he made the sale and purchase:

Day	1	2	3	4	5	6	7	8
A	20	56	56	56	56	0	0	375
B	25	25	0	0	0	0	250	0
C	10	0	0	0	0	197	197	197
D	50	50	125	125	125	125	0	0

The maximum difference in the total number of shares between any two consecutive days = 141 (between Day 5 and Day 6). Choice (A)

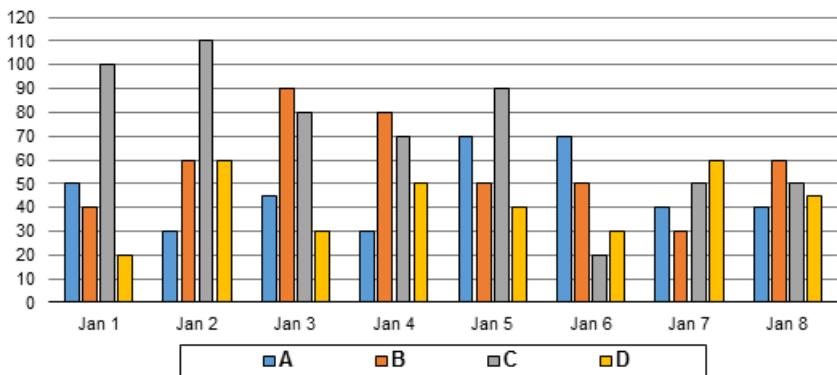
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DIRECTIONS for questions 28 to 31: Answer the questions on the basis of the information given below.

On January 1st, Rahul invested Rs.4000 to purchase the shares of exactly four companies, A, B, C and D, such that he purchased shares worth Rs.1000 of each company. From January 2nd to January 8th, at the beginning of each day, he sold all the shares of the company whose share price was the highest, and then purchased, with the money that he had, as many shares as possible of the company whose share price was the lowest. If, on any day, he did not have any shares of the company whose share price was the highest (among the four companies), he did not sell any shares on that day. While purchasing any shares, Rahul used the maximum possible amount of money available with him and carried forward any amount left unused to the next day.

During the given period, he did not invest any additional amount for purchasing shares and he spent all the money that he obtained from selling any share only for purchasing shares. He sells or purchases any shares only at the beginning of the day.

The following graph provides the price of a share of each of the four companies at the beginning of each of the eight days:



Note: The number of shares purchased or sold can only be integers.

Q31. DIRECTIONS for questions 30 and 31: Select the correct alternative from the given choices.

At the end of Day 8, if Rahul sold the all the shares of A, B, C and D, each at Rs.40, Rs.20, Rs.80 and Rs.30 respectively, what would be the total amount with Rahul?

- a) **Rs.34000**
- b) **Rs.30760**
- c) **Rs.31890**
- d) **Rs.32540**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	560
Avg. time spent on this question by all students	111
Difficulty Level	E
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	5.69
% of students who got the question right of those who attempted	82.3

[Video Solution](#)

[Text Solution](#)

On Day 1, Rahul had 20 shares of A, 25 shares of B, 10 shares of C and 50 shares of D.

On Day 2, Rahul would have sold all the shares of C and purchased shares of A.

Amount from sale of shares of C = $110 \times 10 = 1100$

Number of shares of A purchased = $1100/30 = 36$

He will have ₹20 left on this day.

On Day 3, Rahul would have sold all the shares of B and purchased shares of D.

Amount from sales of shares of B = $25 \times 90 = 2250$

Total amount with him will be 2270.

Number of shares of D purchased = $2270/30 = 75$

He will have ₹20 left on this day.

On Day 4, Rahul would have sold all the shares of B and purchased shares of A.

However, Rahul does not have any shares of B left.

Total amount with him will be 20.

He cannot purchase any shares of A on this day.

He will have ₹20 left on this day.

On Day 5, Rahul would have sold all the shares of C and purchased shares of D.

However, Rahul does not have any shares of C.

Hence, he cannot purchase or sell any shares on this day.

On Day 6, Rahul would have sold all the shares of A and purchased shares of C.

Amount from sale of shares of A = $56 \times 70 = 3920$

Total amount with him = 3940

Number of shares of C purchased = $3940/20 = 197$

He will not have any amount left on this day.

On Day 7, Rahul would have sold all the shares of D and purchased shares of B.

Amount from sale of shares of D = $125 \times 60 = 7500$

Number of shares of B purchased = $7500/30 = 250$

On Day 8, Rahul would have sold all the shares of B and purchased shares of A.

Amount from sale of shares of B = $250 \times 60 = 15000$

Number of shares of A purchased = $15000/40 = 375$

The following table provides the number of shares that Rahul had on each day, after he made the sale and purchase:

Day	1	2	3	4	5	6	7	8
A	20	56	56	56	56	0	0	375
B	25	25	0	0	0	0	250	0
C	10	0	0	0	0	197	197	197
D	50	50	125	125	125	125	0	0

Rahul had 375 shares of A and 197 shares of C.

Total amount with Rahul = $375 \times 40 + 197 \times 80 = 30760$

Choice (B)

Q32. DIRECTIONS for question 32: Each question is followed by two statements, I and II. Answer each question based on the following instructions.

Does the student X, belonging to class A, have a score which is below the average score of class A?

- I. When he migrates to class B, the average scores of both classes go up.
- II. The average score of class B is less than the score of student X.

- a) if the question can be answered by one of the statements alone but not by the other. Your answer is correct
- b) if the question can be answered by using either statement alone.
- c) if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.
- d) if the question cannot be answered even by using both the statements together.

Time spent / Accuracy Analysis

Time taken by you to answer this question	36
Avg. time spent on this question by all students	115
Difficulty Level	E
Avg. time spent on this question by students who got this question right	105
% of students who attempted this question	30.35
% of students who got the question right of those who attempted	65.27

[Video Solution](#)

[Text Solution](#)

With statement I, We can conclude that X has a score below the average of A and above the average of B. Statement II does not talk about the average of class A and hence does not give us the solution. Choice (A)

undefined

Q1. DIRECTIONS for question 1: Select the correct alternative from the given choices.

A two-digit number, N, in base 13 is half the number formed by reversing the digits when considered as a number in base 17. How many possible values does N have?

- a) 0
- b) 1
- c) 2
- d) 3

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	12
Avg. time spent on this question by all students	123
Difficulty Level	M
Avg. time spent on this question by students who got this question right	120
% of students who attempted this question	16.78
% of students who got the question right of those who attempted	23.04

[Video Solution](#)

[Text Solution](#)

Let the number be ab .

$$(ab)_{13} = \frac{1}{2}(ba)_{17}$$

$$\Rightarrow 2(13a + b) = 17b + a$$

$$\Rightarrow 25a = 15b$$

$$\Rightarrow \frac{a}{b} = \frac{3}{5}$$

$\therefore (a, b)$ could be (3, 5) or (6, 10) or (9, 15)

But 15 is not a single digit in base 13.

\therefore There are only two possible values for (a, b) or N.

Choice (C)

undefined

Q2. DIRECTIONS for question 2: Type in your answer in the input box provided below the question.

What is the sum of the first 10 terms following series?

1 (1) + 2 (1 + 2) + 3 (1 + 2 + 3) + 4 (1 + 2 + 3 + 4).....

Your Answer:1705 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	10
Avg. time spent on this question by all students	188
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	184
% of students who attempted this question	41.13
% of students who got the question right of those who attempted	63.18

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned}
 \text{The } n^{\text{th}} \text{ term of the series} &= n(1 + 2 + 3 + 4 + \dots + n) \\
 &= n \times \sum n = n \left[\frac{n(n+1)}{2} \right] = n^2 \left[\frac{(n+1)}{2} \right] \\
 \therefore S_n &= \frac{1}{2} \left[\sum n^3 + \sum n^2 \right] \\
 \therefore S_{10} &= \frac{1}{2} \left[\left(\frac{10(10+1)}{2} \right)^2 + \frac{10(10+1)(2 \times 10+1)}{6} \right] \\
 &= \frac{1}{2} [3025 + 385] = 1705
 \end{aligned}$$

Ans: (1705)

Alternative Solution:

The answer can be directly calculated, since sum upto only ten terms is needed.
 $\text{Sum} = 1(1) + 2(3) + 3(6) + 4(10) + 5(15) + 6(21) + 7(28) + 8(36) + 9(45) + 10(55)$
 $= 1705$

undefined

Q3. DIRECTIONS for questions 3 and 4: Select the correct alternative from the given choices.

Two vessels, whose volumes are in the ratio of 1 : 2, contain sugar solutions. If 20% of the first solution, which is of 30% concentration, is mixed with 30% of the second solution, which is of 20% concentration, find the concentration of the resultant solution.

- a) 20%
- b) $22\frac{1}{2}\%$ Your answer is correct
- c) $23\frac{1}{3}\%$
- d) 26%

Time spent / Accuracy Analysis

Time taken by you to answer this question	4
Avg. time spent on this question by all students	149
Difficulty Level	E
Avg. time spent on this question by students who got this question right	144
% of students who attempted this question	36.59
% of students who got the question right of those who attempted	85.41

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned}\text{Concentration} &= \frac{\text{Total amount of Sugar}}{\text{Total quantity of the solution}} \times 100 \\ &= \frac{0.2 \times 30\% + 0.3 \times 20\% \times 2}{0.2 + 0.6} = 0.18/0.80 \times 100 \\ &= 22.5\%\end{aligned}$$

Choice (B)

undefined

Q4. DIRECTIONS for questions 3 and 4: Select the correct alternative from the given choices.

If n is a natural number greater than 3, then $1075^n - 1075^{n-1}$ is not divisible by which of the following?

- a) 258
- b) 23 Your answer is correct
- c) 43
- d) 179

Time spent / Accuracy Analysis

Time taken by you to answer this question	24
Avg. time spent on this question by all students	162
Difficulty Level	E
Avg. time spent on this question by students who got this question right	170
% of students who attempted this question	26.23
% of students who got the question right of those who attempted	68.39

[Video Solution](#)

[Text Solution](#)

$$1075^{n-1} (1075 - 1)$$

$$1075^{n-1} \times 1074$$

$$1075^{n-1} \times 2 \times 3 \times 179 = 25 \times 43 \times 2 \times 3 \times 179$$

The number is a multiple of 179, 43 and 15 (multiple of 3 and 5) and 258 = 2(3)(43).
But it is not a multiple of 23.

Choice (B)

undefined

Q5. DIRECTIONS for question 5: Type in your answer in the input box provided below the question.

If $A_n = \left(1 - \frac{2}{n}\right)$, where n is any natural number, find the value of $\left(\frac{1}{A_4 \times A_5 \times A_6 \times \dots \times A_{51}}\right)$.

Your Answer:51 Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time spent / Accuracy Analysis

Time taken by you to answer this question	13
Avg. time spent on this question by all students	154
Difficulty Level	E
Avg. time spent on this question by students who got this question right	148
% of students who attempted this question	32.32
% of students who got the question right of those who attempted	56.24

[Video Solution](#)

[Text Solution](#)

$$\text{Given } A_n = \frac{n-2}{n} \Rightarrow A_4 = \frac{2}{4}$$

$$A_5 = \frac{3}{5}$$

$$A_6 = \frac{4}{6}$$

$$A_7 = \frac{5}{7}$$

It can be seen that the denominator of a certain term becomes the numerator of another term exactly 2 terms later.

$\therefore A_4 \times A_5 \times A_6 \times \dots \times A_{51}$.

$$= \frac{2}{4} \times \frac{3}{5} \times \frac{4}{6} \times \dots \times \frac{47}{49} \times \frac{48}{50} \times \frac{49}{51}$$

$$= \frac{(2)(3)}{(50)(51)} = \frac{1}{425}$$

$$\therefore \text{Required answer} = \frac{1}{\left(\frac{1}{425}\right)} = 425$$

Ans: (425)

undefined

Q6. DIRECTIONS for questions 6 to 9: Select the correct alternative from the given choices.

A trader gives a discount based on the number of articles bought by a customer. He gives a discount of 10% when 5 articles are bought and a discount of 12.5% (in Rs.) when 8 articles are bought. If the profit he makes in each case is the same, then the ratio of the marked price to the cost price of the article is

- a) 4 : 3
- b) 3 : 2
- c) 6 : 5
- d) 7 : 6

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	9
Avg. time spent on this question by all students	186
Difficulty Level	E
Avg. time spent on this question by students who got this question right	180
% of students who attempted this question	26.4
% of students who got the question right of those who attempted	82.71

[Video Solution](#)

[Text Solution](#)

The trader gives a discount of 10% when 5 articles are bought and a discount of 12.5% when 8 articles are bought.

Given the profit is the same.

$$\Rightarrow 5(0.9 \text{ MP} - \text{CP}) = 8(0.875 \text{ MP} - \text{CP})$$

$$\Rightarrow \frac{\text{MP}}{\text{CP}} = \frac{6}{5}$$

Choice (C)

undefined

Q7. DIRECTIONS for questions 6 to 9: Select the correct alternative from the given choices.

Consider the following two curves in the XY plane:

$$y = 2x^3 + 3x^2 + 4 \text{ and}$$

$$y = 3x^2 - 2x + 8$$

Which of the following statements is true for $-3 \leq x \leq 2$?

- a) The two curves intersect thrice.
- b) The two curves intersect twice.
- c) The two curves intersect once.
- d) The two curves do not intersect.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	7
Avg. time spent on this question by all students	149
Difficulty Level	M
Avg. time spent on this question by students who got this question right	152
% of students who attempted this question	18.88
% of students who got the question right of those who attempted	69.14

[Video Solution](#)

[Text Solution](#)

The points where the curves intersect correspond to the roots of the equation.

$$2x^3 + 3x^2 + 4 = 3x^2 - 2x + 8 \Rightarrow 2x^3 + 2x - 4 = 0$$

$\Rightarrow x^3 + x - 2 = 0$. We can observe that, $x = 1$ satisfies this equation. So, $x = 1$ is one of its roots. So, $x = 1$ is one point of intersection $x^3 + x - 2 = (x - 1)(x^2 + x + 2)$. As $x^2 + x + 2 = 0$ has no real roots, $x = 1$ is the only common root.

\therefore The two curves intersect once.

Choice (C)

undefined

Q8. DIRECTIONS for questions 6 to 9: Select the correct alternative from the given choices.

ABCD and CDEF are trapeziums. The lines AB, CD and EF are parallel and measure 1.2 m, 2.7 m, 7.2 m respectively. If ED = 3 m and the points B, C and F are collinear and A, D and E are also collinear, find the length of AD.

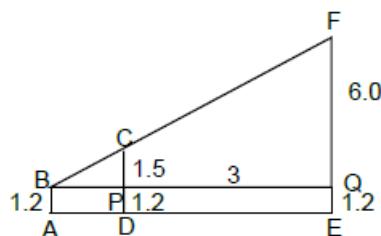
- a) 0.75 m
- b) 1 m Your answer is correct
- c) 1.25 m
- d) 1.5 m

Time spent / Accuracy Analysis

Time taken by you to answer this question	0
Avg. time spent on this question by all students	200
Difficulty Level	M
Avg. time spent on this question by students who got this question right	196
% of students who attempted this question	17.97
% of students who got the question right of those who attempted	61.47

[Video Solution](#)

[Text Solution](#)



In the figure $\triangle BPC \sim \triangle BQF$

As FQ is 4 times CP , BQ is 4 times BP (or PQ is 3 times BP)

As $PQ = 3\text{m}$, $BP = 1\text{ m}$ and $AD = 1\text{ m}$.

Choice (B)

undefined

Q9. DIRECTIONS for questions 6 to 9: Select the correct alternative from the given choices.

A man tosses a coin and wins a rupee for a head and loses a rupee for a tail. Suppose he tosses once, and quits if he wins, but tries once again if he loses on the first toss, then his expected net gain is

- a) Rs.0.25 Your answer is incorrect
- b) Rs.0.75
- c) Rs.1
- d) Rs.0

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	8
Avg. time spent on this question by all students	110
Difficulty Level	E
Avg. time spent on this question by students who got this question right	107
% of students who attempted this question	28.86
% of students who got the question right of those who attempted	56.84

[Video Solution](#)

[Text Solution](#)

$$P(H) = 1/2, P(T) = 1/2$$

There are three possible outcomes – Wins in first try with a head with a probability of $\frac{1}{2}$; Loses in the first and wins in the second try with a probability of $\frac{1}{4}$; Loses in both the first and second tries with a probability of $\frac{1}{4}$.

$$\text{Expected net gain} = \frac{1}{2} \times (1) + \frac{1}{4} (0) + \frac{1}{4} (-2) = 0$$

Choice (D)

undefined

Q10. DIRECTIONS for question 10: Type in your answer in the input box provided below the question.

Find the number of ordered pairs (x, y) , where x and y are positive integers, that satisfy the equation $\frac{1}{x} + \frac{1}{y} = \frac{1}{13}$.

Your Answer:5 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	136
Avg. time spent on this question by all students	117
Difficulty Level	M
Avg. time spent on this question by students who got this question right	113
% of students who attempted this question	28.8
% of students who got the question right of those who attempted	28.21

[Video Solution](#)

[Text Solution](#)

Clearly $x > 13$ and $y > 13$
Let $x = 13 + q$ and $y = 13 + r$

$$\text{Given } \frac{1}{13+q} + \frac{1}{13+r} = \frac{1}{13}$$

$$\Rightarrow 13(26 + q + r) = 169 + 13r + 13q + rq$$

$$\Rightarrow 169 = rq$$

$\therefore (q, r) = (1, 169)$ or $(13, 13)$ or $(169, 1)$ and (x, y)

$= (14, 182)$ or $(26, 26)$ or $(182, 14)$

\therefore Three ordered pairs are possible.

Alternative Solution:

The given equation can be rewritten as $xy - 13x - 13y = 0$

This can be written as $xy - 13x - 13y + 169 = 169$

Therefore, $(x - 13)(y - 13) = 169$. Since both x and y are positive integers

$(x - 13)(y - 13) = (13 \times 13)$ OR (1×169) OR (169×1)

$$\Rightarrow (x, y) = (26, 26)$$
 OR $(14, 182)$ OR $(182, 14)$

Only 3 cases are possible.

Ans: (3)

undefined

Q11. DIRECTIONS for questions 11 and 12: Select the correct alternative from the given choices.

There are two drums D_1 and D_2 , each of which is filled to the brim with water. Now, a leak is made at the bottom of each of D_1 and D_2 , such that the leak in D_1 takes 6 hours to empty it, while the leak in D_2 takes 9 hours to empty it. If the capacity of D_1 is more than the capacity of D_2 by 60%, then find the time after which the volume of water in D_2 will be 25% more than the volume of water in D_1 .

a) $2\frac{17}{23}$ hours

b) $4\frac{1}{2}$ hours

c) 3 hours

d) $4\frac{2}{3}$ hours

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question

8

Avg. time spent on this question by all students

217

Difficulty Level

M

Avg. time spent on this question by students who got this question right 211

Time spent / Accuracy Analysis

% of students who attempted this question	17.86
% of students who got the question right of those who attempted	65.33

[Video Solution](#)**Text Solution**

Initially the volume of water in D_1 is more than the volume of water in D_2 by 60%

Let the capacities of the drums D_1 and D_2 be V_1 and V_2 respectively

$$\therefore V_1 = V_2 + \frac{60}{100} (V_2)$$

Let V_2 be $5k$, therefore $V_1 = 8k$

Rate at which water leaks from $V_1 = \frac{8k}{6}$ and the rate at which water leaks from

$$V_2 = \frac{5k}{9}$$

Let the time after which the volume of water left in D_2 becomes 25% more than the volume of water left in D_1 be t .

In time t , water leaking out of $D_1 = \frac{8k}{6}t$ and the water leaking out of $D_2 = \frac{5k}{9}t$

Therefore the water left in $D_1 = 8k - \frac{8k}{6}t$ and the water left in $D_2 = 5k - \frac{5k}{9}t$

$$\text{Now, } \frac{5}{4} \left(8k - \frac{8k}{6}t \right) = \left(5k - \frac{5k}{9}t \right)$$

$$5 - \frac{5}{9}t = \frac{5}{4} \left(8 - \frac{8}{6}t \right)$$

$$\text{Or, } 5 - \frac{5}{9}t = 10 - \frac{5}{3}t$$

$$\text{Or, } \frac{5}{3}t - \frac{5}{9}t = 5$$

$$\text{Or, } \frac{2}{9}t = 1$$

$$\text{Or, } t = 4.5 \text{ hours.}$$

Choice (B)

undefined

Q12. DIRECTIONS for questions 11 and 12: Select the correct alternative from the given choices.

A and B are two points on the co-ordinate plane. A is $\left(\frac{8}{3}, \frac{-4}{3}\right)$ and B is $\left(\frac{16}{3}, \frac{-20}{3}\right)$. If B is the reflection of A with respect to a line $mx + ny + k = 0$, find the foot of the perpendicular drawn to the line from the point A.

- a) $(-8, 8)$
- b) $(8, -8)$ Your answer is incorrect
- c) $(4, -4)$
- d) $\left(\frac{3}{4}, \frac{-4}{3}\right)$

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question

Time spent / Accuracy Analysis

Avg. time spent on this question by all students	105
Difficulty Level	M
Avg. time spent on this question by students who got this question right	109
% of students who attempted this question	15.1
% of students who got the question right of those who attempted	64.83

[Video Solution](#)

Text Solution

As B is the reflection of A with respect to a line, the foot of the perpendicular drawn to the line from A would be the mid point of AB.

∴ Its coordinates would be

$$\left(\frac{\left(\frac{8}{3} + \frac{16}{3} \right)}{2}, \frac{\left(\frac{-4}{3} - \frac{20}{3} \right)}{2} \right) = (4, -4). \quad \text{Choice (C)}$$

undefined

Q13. DIRECTIONS for question 13: Type in your answer in the input box provided below the question.

A circle is drawn taking the line joining the points (7, 3) and (-17, -7) as diameter and another circle of radius 5 units is drawn with centre as (3, -8). Find the number of common tangents to the two circles.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	24
Avg. time spent on this question by all students	137
Difficulty Level	E
Avg. time spent on this question by students who got this question right	138
% of students who attempted this question	29.16
% of students who got the question right of those who attempted	57.73

[Video Solution](#)

Text Solution

The diameter of the first circle

$$= \sqrt{(7 - (-17))^2 + (3 - (-7))^2} = 26 \text{ units}$$

Hence, radius = 13 units

$$\text{Also, the centre of the circle} = \left(\frac{7 - 17}{2}, \frac{3 - 7}{2} \right)$$

$$= (-5, -2)$$

The distance between the centres of the two circles

$$= \sqrt{(3 + 5)^2 + (2 + 8)^2} = \sqrt{8^2 + 6^2} = 10 \text{ units.}$$

Let the centres of the circles be C_1 and C_2 and the radii be R_1 and R_2 .

Now, $C_1 C_2 = 10$ and $R_1 + R_2 = 5 + 13 = 18$.

Since $|R_2 - R_1| < C_1 C_2 < |R_2 + R_1|$, the two circles intersect each other. Hence, they will have only two common tangents. Ans: (2)

undefined

Q14. DIRECTIONS for question 14: Select the correct alternative from the given choices.

The speeds of Aniket, Brihat and Chatur are in the ratio of 4 : 3 : 2. If Chatur takes half an hour more than Brihat to travel from P to Q, what is the total time taken by Aniket to travel from P to Q and then back from Q to P?

- a) **120 minutes**
- b) **90 minutes** Your answer is correct
- c) **60 minutes**
- d) **45 minutes**

Time spent / Accuracy Analysis

Time taken by you to answer this question	13
Avg. time spent on this question by all students	135
Difficulty Level	M
Avg. time spent on this question by students who got this question right	131
% of students who attempted this question	40.66
% of students who got the question right of those who attempted	73.32

[Video Solution](#)

[Text Solution](#)

Let the distance PQ = d km, the ratio of speeds of A, B and C is given as 4 : 3 : 2. To cover d km, the ratio of the times taken is $\frac{1}{4} : \frac{1}{3} : \frac{1}{2}$ i.e. 3 : 4 : 6.

Let them take $3k$, $4k$ and $6k$ minutes to cover d km.

Given that $6k - 4k = 30$ minutes $\Rightarrow k = 15$ minutes

To travel $2d$ km, Aniket would take $2 \times 3k$ i.e., $6k$ minutes = i.e. 90 minutes.

Choice (B)

undefined

Q15. DIRECTIONS for question 15: The question is followed by two statements, I and II. You have to decide whether the information provided in the statements is sufficient for answering the question, and select the correct answer choice.

Is $a + b - c + d$ an even integer, where a, b, c and d are all integers?

- I.
Two of a, b, c, d are even integers and the remaining two are odd integers.
- II.
The product of a, b, c, d is odd.

- a) **The question can be answered by using only one of the statements.** Your answer is incorrect
- b) **The question can be answered by using either statement alone.**

- c) The question can be answered by using both the statements together, but cannot be answered by using either statement alone.
- d) The question cannot be answered even when both the statements are used together.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	14
Avg. time spent on this question by all students	107
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	107
% of students who attempted this question	32.94
% of students who got the question right of those who attempted	61.66

[Video Solution](#)

[**Text Solution**](#)

From statement I, two of the four integers are even and the remaining two are odd.
 Since $(a + b - c + d)$ involves only addition and subtraction, two odd and two even numbers will always yield an even number.
 Statement I alone is sufficient
 From statement II, since the product $(a)(b)(c)(d)$ is odd, all of a, b, c and d are odd
 Therefore $a + b + d - c$ is even.
 Statement II alone is sufficient.
 Thus, either statement alone is sufficient to answer the question. Choice (B)

undefined

Q16. DIRECTIONS for question 16: Select the correct alternative from the given choices.

The average marks scored by two sections – A and B – of a class are 70 and 75 respectively. Three students moved from section B to section A, thereby interchanging the average marks of the two sections. Find the total number of students in the two sections put together, if the average marks scored by the three students who moved is 95.

- a) 12
- b) 24
- c) 27 **Your answer is correct**
- d) 36

Time spent / Accuracy Analysis

Time taken by you to answer this question	153
Avg. time spent on this question by all students	176
Difficulty Level	M
Avg. time spent on this question by students who got this question right	175
% of students who attempted this question	30.32
% of students who got the question right of those who attempted	87.81

[Video Solution](#)

[**Text Solution**](#)

Let the number of students in section A be x and section B be y .
 Total marks scored by the students will be $70x$ and $75y$.
 $75y - 3 \times 95 = 70(y - 3)$.
 $75y - 285 = 70y - 210 \Rightarrow 5y = 75 \Rightarrow y = 15$.
 Similarly $70x + 285 = 75(x + 3)$
 $\Rightarrow 5x = 60 \Rightarrow x = 12$
 Thus the total number of students = $15 + 12 = 27$

Choice (C)

undefined

Q17. DIRECTIONS for questions 17 to 19: Type in your answer in the input box provided below the question.

There are 100 tokens numbered from 1 to 100. In how many ways can two tokens be drawn simultaneously so that their sum is more than 100?

You did not answer this question [Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	234
Avg. time spent on this question by all students	119
Difficulty Level	D
Avg. time spent on this question by students who got this question right	151
% of students who attempted this question	25.38
% of students who got the question right of those who attempted	8.94

[Video Solution](#)

Text Solution

If token number 1 is taken then for the sum to be more than 100, only token numbered 100 has to be taken i.e. 1 way. Similarly, we can draw the following table.

Token Number	Other token numbers that can be selected
1	100 i.e. 1 way
2	99, 100 i.e. 2 ways
3	98, 99, 100 i.e. 3 ways
4	97, 98, 99, 100 i.e. 4 ways
.	
.	
.	
50	51 100 i.e. 50 ways
51	52 100 i.e. 49 ways
52	53 100 i.e. 48 ways
.	
.	
98	99, 100 i.e. 2 ways
99	100 ... i.e. 1 way

∴ Total number of ways of selection is

$$1 + 2 + \dots + 50 + 49 + 48 + \dots + 1$$

$$= \frac{50 \times 51}{2} + \frac{49 \times 50}{2} = 50 \left(\frac{51+49}{2} \right) = 2500$$

Ans: (2500)

undefined

Q18. DIRECTIONS for questions 17 to 19: Type in your answer in the input box provided below the question.

A *k-triple* is defined as $(k/2, k/3, 3k/7)$, where all three terms in the brackets are positive integers. If $k \leq 1000$, what is the largest value of k for which a *k-triple* can be defined?

Your Answer:986 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	233
Avg. time spent on this question by all students	110
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	109
% of students who attempted this question	28.79
% of students who got the question right of those who attempted	77.97

[Video Solution](#)

[Text Solution](#)

As all the three numbers $k/2, k/3, 3k/7$ are integers, the least value of $k = \text{LCM}(2, 3, 7) = 42$. The largest value of $k \leq 1,000$ is the largest multiple of 42, which is less than or equal to 1,000 $\Rightarrow k = 966$.
Ans: (966)

undefined

Q19. DIRECTIONS for questions 17 to 19: Type in your answer in the input box provided below the question.

In a certain class of students, for every 36 students who play Cricket, 12 students play Hockey. Also for every 10 students who play exactly one of the two games, there are 5 students who play both the games and 5 students who play neither. If the strength of the class is less than 150, find the number of students who play only Hockey.

You did not answer this question

Show Correct Answer

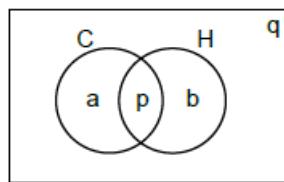
Time spent / Accuracy Analysis

Time taken by you to answer this question	277
Avg. time spent on this question by all students	180
Difficulty Level	E
Avg. time spent on this question by students who got this question right	196
% of students who attempted this question	10.51
% of students who got the question right of those who attempted	27.44

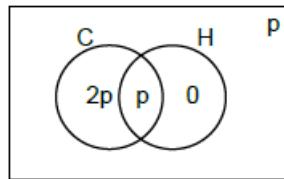
[Video Solution](#)

[Text Solution](#)

Let the number of students who play only cricket, only hockey, both and neither be a, b, p, q respectively.



Given $a + p : p + b = 3 : 1 \dots\dots\dots(1)$
and $a + b : p : q = 2 : 1 : 1 \dots\dots\dots(2)$

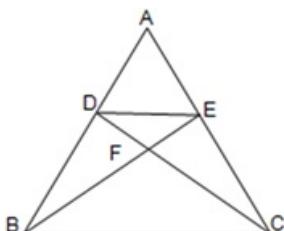


Clearly, irrespective of the number of students in the class, the number of students playing only Hockey is zero.
Ans: (0)

undefined

Q20. DIRECTIONS for question 20: Select the correct alternative from the given choices.

In the triangle ABC shown below, DE is parallel to BC and D divides AB in the ratio 1 : 3.



If the area of triangle ADE is 5 sq.cm, what is the area of the triangle EFC?

- a) 12 sq.cm
- b) 14.4 sq.cm
- c) 15 sq.cm
- d) 16 sq.cm

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	133
Avg. time spent on this question by all students	139
Difficulty Level	M
Avg. time spent on this question by students who got this question right	147
% of students who attempted this question	13.2
% of students who got the question right of those who attempted	42.03

[Video Solution](#)

[Text Solution](#)

Given DE is parallel to BC
⇒ Δ ADE is similar to ΔABC
Also given that $AD = \frac{1}{4}(AB)$
⇒ Area [ΔABC] = $16 \times$ Area [ΔADE] = $16 \times 5 \text{ cm}^2 = 80 \text{ cm}^2$
⇒ Area [trapezium BCED] = $80 - 5$ or 75 cm^2
In the trapezium BCED,
Area [ΔBFC] = $16 \times$ Area [ΔDEF] [$\because BC = 4(DE)$]
Let the area of ΔDEF be x .
⇒ Area [ΔBFC] = $16x$
Area [ΔBDF] = Area [ΔCFE]
= $\sqrt{\text{Area}[\Delta DEF] \times \text{Area}[\Delta BFC]}$
= $\sqrt{x \times 16x} = 4x$
∴ Area of the trapezium BCED
= $x + 16x + 4x + 4x$
= $25x = 75 \text{ cm}^2 \Rightarrow x = 3 \text{ sq.cm}$
∴ Area [ΔCFE] = $4x = 12 \text{ sq.cm}$

Choice (A)

undefined

Q21. DIRECTIONS for questions 21 to 23: Type in your answer in the input box provided below the question.

Two containers, one in the shape of an inverted cone (i.e., vertex pointing downwards) and the other in the shape of a right circular cylinder, are interconnected at the bottom using a thin rubber pipe, so that water can flow freely between the two. The height of the cone and the height of the cylinder are both 48 cm and the radius of the cylinder and the radius of the base of the cone are both r cm. Initially, both containers are filled to exactly half their heights with water, and the vertex of the cone is at the same level as the base of the cylinder.

If when the cylinder is raised by x cm, the cone is just filled to the brim, find x .

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	307
Avg. time spent on this question by all students	142
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	190
% of students who attempted this question	5.55
% of students who got the question right of those who attempted	0.92

[Video Solution](#)

[Text Solution](#)

Fig.1

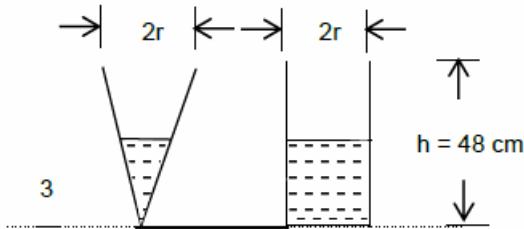
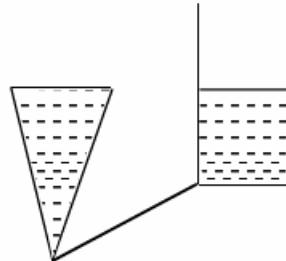


Fig.2



The volume of the cone is $(1/3)\pi r^2 h = 16\pi r^2 = 8v$ (say) and that of the cylinder is $\pi r^2 h = 48\pi r^2 = 24v$

The volume of the water in the cone is v and that of the water in the cylinder is $12v$, i.e. the total is $13v$.

If the cone is full to the brim, (show in fig.2), there is only $5v$ in the cylinder.

As the height corresponding to $12v$ is 24 cm,
the height corresponding to $5v$ is 10 cm

$\therefore x = h - 10 = 48 - 10 = 38$, i.e. the cylinder is raised through 38 cm. Ans: (38)

undefined

Q22. DIRECTIONS for questions 21 to 23: Type in your answer in the input box provided below the question.

The total expenses of a hostel are partly fixed and partly varying linearly with the number of inmates. The average expense per inmate is Rs.700, when there are 30 inmates, but it is Rs.550 when there are 60 inmates. What is the average expense per inmate when there are 180 inmates?

Your Answer:450 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	143
Avg. time spent on this question by all students	160
Difficulty Level	E
Avg. time spent on this question by students who got this question right	159
% of students who attempted this question	35.49
% of students who got the question right of those who attempted	57.29

[Video Solution](#)

Text Solution

Let the fixed expenditure be F and the variable expenditure be v per inmate

$$30(700) = F + 30v \quad \dots (1)$$

$$60(550) = F + 60v \quad \dots (2)$$

Subtracting (1) from (2), we get $30v = 12000 \Rightarrow v = 400$

$$F = (700 - 400) 30 = 9000$$

Average expense per inmate when there are 180 inmates

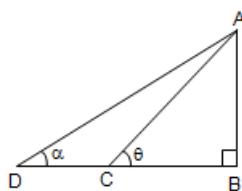
$$= \frac{9000 + 400(180)}{180} = 50 + 400 = 450.$$

Ans: (450)

undefined

Q23. DIRECTIONS for questions 21 to 23: Type in your answer in the input box provided below the question.

In the figure given below, if $BC = 25$ m, $BD = 64$ m and $\theta + \alpha = 90^\circ$, then find AB (in m).



You did not answer this question

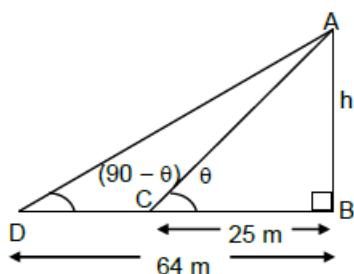
Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	133
Avg. time spent on this question by all students	138
Difficulty Level	E
Avg. time spent on this question by students who got this question right	127
% of students who attempted this question	23.1
% of students who got the question right of those who attempted	63.26

[Video Solution](#)

Text Solution



Let the height of the tower be h .

$$\frac{h}{25} = \tan \theta \quad \dots (1)$$

$$\text{Also, } h/64 = \tan (90^\circ - \theta) = \cot \theta \quad \dots (2)$$

$$(1) \times (2) \Rightarrow \frac{h}{25} \times \frac{h}{64} = 1$$

$$\Rightarrow h^2 = 25 \times 64$$

$$\therefore h = 5 \times 8 = 40 \text{ m}$$

Ans: (40)

undefined

Q24. DIRECTIONS for question 24: Select the correct alternative from the given choices.

Which of the following points can form a triangle with the points (4, 6) and (9, 8)?

i.
(-9,
1)

ii.
(-6,
2)

iii.
(14,
10)

- a) Only (i) and (ii)
- b) Only (ii) and (iii)
- c) Only (i)
- d) Only (iii)

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	163
Avg. time spent on this question by all students	134
Difficulty Level	E
Avg. time spent on this question by students who got this question right	132
% of students who attempted this question	20.13
% of students who got the question right of those who attempted	42.26

[Video Solution](#)

Text Solution

Let A(4, 6) and B(9, 8) be the given points.

The points which do not lie on the line segment AB can form a triangle with points A and B.

$$\text{Slope of line} = \frac{8-6}{9-4} = \frac{2}{5}$$

Equation of the line is

$$y - 6 = \frac{2}{5}(x - 4)$$

$$\Rightarrow 5y - 30 = 2x - 8$$

$$\Rightarrow 2x - 5y + 22 = 0$$

Among the given points, only (-9, 1) does not lie on the above line.

Choice (C)

undefined

undefined

Q25. DIRECTIONS for question 25: The question is followed by two statements, I and II. You have to decide whether the information provided in the statements is sufficient for answering the question, and select the correct answer choice.

The ratio of the incomes of Anil and Komal is 3 : 4. Does Anil save more than Komal, given that a person earns more than he/she spends?

I.
The ratio of the expenditures of Anil and Komal is 2 :
3.

II.
The ratio of the expenditures of Anil and Komal is 4 :
5.

- a) The question can be answered by using only one of the statements. Your answer is correct
- b) The question can be answered by using either statement alone.
- c) The question can be answered by using both the statements together, but cannot be answered by using either statement alone.
- d) The question cannot be answered even when both the statements are used together.

Time spent / Accuracy Analysis

Time taken by you to answer this question	67
Avg. time spent on this question by all students	102
Difficulty Level	E
Avg. time spent on this question by students who got this question right	118
% of students who attempted this question	30.26
% of students who got the question right of those who attempted	21.27

[Video Solution](#)

[Text Solution](#)

. From statement I, the ratio of the expenditures of Anil and Komal is 2 : 3.
Let us take different cases to find out who saves more.

Case I	Anil	Komal
Income	300	400
Expenditure	20	30
Savings	280	370

The savings of Komal are more than the savings of Anil.

Case II	Anil	Komal
Income	300	400
Expenditure	240	360
Saving	60	40

The savings of Anil are more than the savings of Komal.

Therefore, statement I alone is not sufficient.

From statement II, the ratio of the expenditures of Anil and komal is 4 : 5.

Considering different cases,

Case I	Anil	Komal
Income	300	400
Expenditure	40	50
Saving	260	350

Case II	Anil	Komal
Income	300	400
Expenditure	300	375
Saving	0	25

As we increase the value of their expenditures, the difference between their savings decreases. We see that even when Anil does not save anything, Komal saves ₹25. Therefore, the savings of Komal will always be more than those of Anil.

The question can be answered from statement II alone, but cannot be answered from statement I alone.

Choice (A)

Q25. DIRECTIONS for question 25: The question is followed by two statements, I and II. You have to decide whether the information provided in the statements is sufficient for answering the question, and select the correct answer choice.

The ratio of the incomes of Anil and Komal is 3 : 4. Does Anil save more than Komal, given that a person earns more than

he/she spends?

- I.
The ratio of the expenditures of Anil and Komal is 2 : 3.
- II.
The ratio of the expenditures of Anil and Komal is 4 : 5.
- a) The question can be answered by using only one of the statements. Your answer is correct
- b) The question can be answered by using either statement alone.
- c) The question can be answered by using both the statements together, but cannot be answered by using either statement alone.
- d) The question cannot be answered even when both the statements are used together.

Time spent / Accuracy Analysis

Time taken by you to answer this question	67
Avg. time spent on this question by all students	102
Difficulty Level	E
Avg. time spent on this question by students who got this question right	118
% of students who attempted this question	30.26
% of students who got the question right of those who attempted	21.27

[Video Solution](#)

[Text Solution](#)

. From statement I, the ratio of the expenditures of Anil and Komal is 2 : 3.
Let us take different cases to find out who saves more.

Case I	Anil	Komal
Income	300	400
Expenditure	20	30
Savings	280	370

The savings of Komal are more than the savings of Anil.

Case II	Anil	Komal
Income	300	400
Expenditure	240	360
Saving	60	40

The savings of Anil are more than the savings of Komal.

Therefore, statement I alone is not sufficient.

From statement II, the ratio of the expenditures of Anil and komal is 4 : 5.

Considering different cases,

Case I	Anil	Komal
Income	300	400
Expenditure	40	50
Saving	260	350

Case II	Anil	Komal
Income	300	400
Expenditure	300	375
Saving	0	25

As we increase the value of their expenditures, the difference between their savings decreases. We see that even when Anil does not save anything, Komal saves ₹25. Therefore, the savings of Komal will always be more than those of Anil.

The question can be answered from statement II alone, but cannot be answered from statement I alone.

Choice (A)

undefined

Q26. DIRECTIONS for question 26: Select the correct alternative from the given choices.

To row a certain distance upstream, Mandira takes 24 minutes, while to row the same distance downstream, she takes only 6 minutes. How much time would she take to row the same distance in still water?

- a) **12 minutes**
- b) **9.6 minutes** Your answer is correct
- c) **10.8 minutes**
- d) **14.4 minutes**

Time spent / Accuracy Analysis

Time taken by you to answer this question	175
Avg. time spent on this question by all students	136
Difficulty Level	E
Avg. time spent on this question by students who got this question right	137
% of students who attempted this question	30.55
% of students who got the question right of those who attempted	82.88

[Video Solution](#)

[Text Solution](#)

Let v and u be Mandira's speed in still water and the speed of the stream respectively.
Let d be the distance covered in each direction.

$$\begin{aligned} \text{Given that, } \frac{d}{v+u} &= 6 \text{ and } \frac{d}{v-u} = 24 \\ \Rightarrow \frac{v+u}{v-u} &= 4 \Rightarrow v = \frac{5}{3}u \Rightarrow \frac{d}{v + \frac{3u}{5}} = 6 \\ \Rightarrow \frac{d}{v} &= \frac{8}{5} (6) = 9.6 \end{aligned}$$

∴ Time she takes to cover the same distance in still water is 9.6 minutes.

Choice (B)

undefined

Q26. DIRECTIONS for question 26: Select the correct alternative from the given choices.

To row a certain distance upstream, Mandira takes 24 minutes, while to row the same distance downstream, she takes only 6 minutes. How much time would she take to row the same distance in still water?

- a) **12 minutes**
- b) **9.6 minutes** Your answer is correct
- c) **10.8 minutes**
- d) **14.4 minutes**

Time spent / Accuracy Analysis

Time taken by you to answer this question	175
Avg. time spent on this question by all students	136
Difficulty Level	E
Avg. time spent on this question by students who got this question right	137
% of students who attempted this question	30.55
% of students who got the question right of those who attempted	82.88

[Video Solution](#)

[Text Solution](#)

Let v and u be Mandira's speed in still water and the speed of the stream respectively.
Let d be the distance covered in each direction.

$$\text{Given that, } \frac{d}{v+u} = 6 \text{ and } \frac{d}{v-u} = 24$$

$$\Rightarrow \frac{v+u}{v-u} = 4 \Rightarrow v = \frac{5}{3}u \Rightarrow \frac{d}{v + \frac{3u}{5}} = 6$$

$$\Rightarrow \frac{d}{v} = \frac{8}{5} (6) = 9.6$$

∴ Time she takes to cover the same distance in still water is 9.6 minutes.

Choice (B)

undefined

Q27. DIRECTIONS for questions 27 and 28: Type in your answer in the input box provided below the question.

For how many of the following ranges of x is $x^3 > x^{1/3} > 1/x$?

I.
 $x < -1$

II.
 $-1 < x < 0$

III.
 $0 < x < 1$

IV.
 $x > 1$

Your Answer: 1 □ **Your answer is incorrect**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	300
Avg. time spent on this question by all students	98
Difficulty Level	E
Avg. time spent on this question by students who got this question right	96

Time spent / Accuracy Analysis

% of students who attempted this question	27.23
% of students who got the question right of those who attempted	56.33

[Video Solution](#)**Text Solution**

Consider the options

I. For $x < -1$, say $x = -8$, $x^3 = -64$, $x^{1/3} = -2$
 $x^3 > x^{1/3} > 1/x$ is false

II. $-1 < x < 0$
 $-1 < x^3 < 0$
 $-1 < x^{1/3} < 0$ and $1/x < -1$
Further $x^3 > x^{1/3}$
 \therefore The statement holds

III. $0 < x < 1$
 $x^3 < 1$ and $1/x > 1$
 \therefore The statement is false

IV. $x > 1$, $x^3 > x$ and $1 < x^{1/3} < x$ and $1/x < 1$
 $\therefore x^3 > x^{1/3} > 1$
The statement holds for (IV)
The statement holds for II and IV

Ans: (2)

undefined

undefined

Q28. DIRECTIONS for questions 27 and 28: Type in your answer in the input box provided below the question.

If the sum of three integers is 10, then the least possible sum of the fourth powers of the three integers is

Your Answer:418 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	165
Avg. time spent on this question by all students	98
Difficulty Level	D
Avg. time spent on this question by students who got this question right	93
% of students who attempted this question	29.78
% of students who got the question right of those who attempted	54.36

[Video Solution](#)**Text Solution**

If the sum of some numbers is a constant, then the sum of their n^{th} powers is minimum when the numbers are equal. (when n is an even natural number),
Let a , b and c be the three integers.

Given $a + b + c = 10$

So, $a^4 + b^4 + c^4$ will have minimum value when $a = b = c = \frac{10}{3}$.

But since this is not possible they must chosen as close to each other as possible.
 $(a, b, c) = (3, 3, 4)$ or some other order of the same combination.

$$a^4 + b^4 + c^4 = 3^4 + 3^4 + 4^4 = 418$$

Ans: (418)

Q28. DIRECTIONS for questions 27 and 28: Type in your answer in the input box provided below the question.

If the sum of three integers is 10, then the least possible sum of the fourth powers of the three integers is

Your Answer:418 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	165
Avg. time spent on this question by all students	98
Difficulty Level	D
Avg. time spent on this question by students who got this question right	93
% of students who attempted this question	29.78
% of students who got the question right of those who attempted	54.36

[Video Solution](#)

[Text Solution](#)

If the sum of some numbers is a constant, then the sum of their n^{th} powers is minimum when the numbers are equal. (when n is an even natural number),
Let a , b and c be the three integers.

Given $a + b + c = 10$

So, $a^4 + b^4 + c^4$ will have minimum value when $a = b = c = \frac{10}{3}$.

But since this is not possible they must chosen as close to each other as possible.
 $(a, b, c) = (3, 3, 4)$ or some other order of the same combination.

$$a^4 + b^4 + c^4 = 3^4 + 3^4 + 4^4 = 418$$

Ans: (418)

undefined

Q29. DIRECTIONS for question 29: Select the correct alternative from the given choices.

A triangle has its longest side as 38 cm. If one of the other two sides is 10 cm and the area of the triangle is 152 sq.cm., find the length of the third side.

- a) $15\sqrt{5}$ cm
- b) $15\sqrt{6}$ cm
- c) $8\sqrt{17}$ cm
- d) $4\sqrt{51}$ cm

You did not answer this question

Show Correct Answer

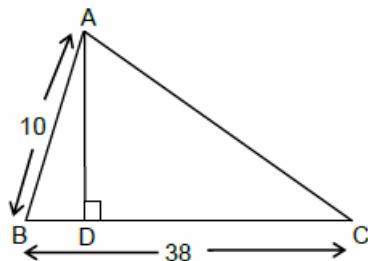
Time spent / Accuracy Analysis

Time taken by you to answer this question	85
Avg. time spent on this question by all students	181
Difficulty Level	M
Avg. time spent on this question by students who got this question right	194
% of students who attempted this question	8.8
% of students who got the question right of those who attempted	52.97

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Let AD be perpendicular to BC, the largest side.



Area of triangle ABC = 152

$$\Rightarrow \frac{1}{2} (38) (AD) = 152$$

$$\Rightarrow AD = 8$$

As ABCD is a right angled triangle, $AB^2 = AD^2 + BD^2$

$$\Rightarrow 100 = 64 + BD^2$$

$$\Rightarrow BD = 6$$

$$\Rightarrow CD = 32$$

Also $\triangle ADC$ is a right angled triangle.

$$\Rightarrow AC^2 = (32)^2 + (8)^2$$

$$AC = \sqrt{1088} = 8\sqrt{17}$$

Choice (C)

undefined

Q30. DIRECTIONS for question 30: Type in your answer in the input box provided below the question.

Kiran had the habit of taking some amount with him to the temple every Sunday and distributing it among poor people. Being an egalitarian at heart, he always made it a point on any given Sunday to distribute equal amounts, which were an integral number of rupees, to every poor person that he helped (the amount per person was not necessarily the same every week). On the first Sunday of October, he took Rs.340 with him and returned home with Rs.4 and on the second Sunday he took Rs.650 with him and returned with Rs.10, having donated to exactly the same number of people as on the first Sunday. Find the maximum possible number of people who received the donations on the two Sundays put together.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	50
Avg. time spent on this question by all students	156
Difficulty Level	M
Avg. time spent on this question by students who got this question right	164
% of students who attempted this question	11.18
% of students who got the question right of those who attempted	35.15

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The number of people who received donations on the first Sunday is a factor of $340 - 4$ or 336, while the number of those who received donations on the second Sunday is a factor of $650 - 10$ or 640.

As the same number of people received donations on the two days, this number is a common factor of 336 and 640. As we want this to be the maximum possible number, we are looking for the HCF of 336 and 640, which is 16. Therefore the total number of people who got donations on the two days is 32. Ans : (32)

undefined

Q31. DIRECTIONS for question 31: Select the correct alternative from the given choices.

What is the value of the expression given below?

$$\frac{1}{1^2 - \frac{1}{2^2 - \frac{1}{3^2 - \frac{1}{4^2 - \frac{1}{5^2}}}}} + \frac{1}{-3 + \frac{1}{3^2 - \frac{1}{4^2 - \frac{1}{5^2}}}}$$

a) $1.\overline{33}$

b) **1.25**

c)

1

d) **None of the above**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	99
Avg. time spent on this question by all students	143
Difficulty Level	E
Avg. time spent on this question by students who got this question right	147
% of students who attempted this question	9.45
% of students who got the question right of those who attempted	59.53

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On careful observation both the terms contain a common term y , where

$$y = \frac{1}{2^2 - \frac{1}{3^2 - \frac{1}{4^2 - \frac{1}{5^2}}}}$$

$$\frac{1}{-3 + \frac{1}{3^2 - \frac{1}{4^2 - \frac{1}{5^2}}}} \text{ is } 1 - \left[\frac{1}{2^2 - \frac{1}{3^2 - \frac{1}{4^2 - \frac{1}{5^2}}}} \right]$$

The expression given equals $\frac{1}{1-y} + \frac{1}{1-\frac{1}{y}}$

$$\Rightarrow \frac{1}{1-y} - \frac{y}{1-y} = \frac{1-y}{1-y} = 1$$

Choice (C)

undefined

Q32. DIRECTIONS for questions 32 and 33: Type in your answer in the input box provided below the question.

On a 8×8 chessboard, in how many ways can two squares be chosen such that they have only one corner in common?

1

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	103
Avg. time spent on this question by all students	102
Difficulty Level	E
Avg. time spent on this question by students who got this question right	112
% of students who attempted this question	14.74
% of students who got the question right of those who attempted	7.71

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Consider the 2 squares that can be chosen from the first 2 columns.

When the first square is chosen either from the top row or the bottom row in the first column, only one square can be chosen from the 2nd column such that they have only one corner in common. If any other square is chosen from the first column, 2 squares can be chosen for each square. Thus from the first two columns, $2 \times 1 + 6 \times 2$ or 14 pairs of squares can be chosen.

In a 8×8 chessboard, 7 pairs of adjacent columns can be chosen.

∴ The total number of ways of choosing the squares
 $= 7 \times 14 = 98$.

Ans: (98)

undefined

Q33. DIRECTIONS for questions 32 and 33: Type in your answer in the input box provided below the question.

If $x = \sqrt[3]{p + \sqrt{p^2 + q^3}} + \sqrt[3]{p - \sqrt{p^2 + q^3}}$, then $\frac{x^3 + 3qx}{p} =$

1

Your Answer:2 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	177
Avg. time spent on this question by all students	106
Difficulty Level	E
Avg. time spent on this question by students who got this question right	123
% of students who attempted this question	11.02
% of students who got the question right of those who attempted	53.82

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Cubing the expression for x , we get

$$x^3 = 2p + 3\sqrt[3]{-q^3} (x) = 2p - 3qx$$

$$\therefore \frac{x^3 + 3qx}{p} = 2$$

Ans: (2)

undefined

Q34. DIRECTIONS for question 34: Select the correct alternative from the given choices.

Anna, Ben and Clark together have a total of Rs.100 with them. If Anna gives Rs.13 to Ben, then Ben will have four times of what Anna has, whereas if Clark gives Rs.7 to Ben, then Clark will have one-third of what Ben has. What amount should Ben give to Clark, so that both of them have the same amount?

- a) **Rs.10**
- b) **Rs.11** Your answer is correct
- c) **Rs.13**
- d) **Rs.20**

Time spent / Accuracy Analysis

Time taken by you to answer this question	160
Avg. time spent on this question by all students	263
Difficulty Level	M
Avg. time spent on this question by students who got this question right	263
% of students who attempted this question	14.99
% of students who got the question right of those who attempted	82.13

[Video Solution](#)

[Text Solution](#)

Let the amounts with Anna, Ben and Clark be ₹a, ₹b and ₹c respectively.

$$a + b + c = 100$$

$$4(a - 13) = b + 13$$

$$3(c - 7) = b + 7$$

Solving these equations, we get $a = ₹28$, $b = ₹47$, and $c = ₹25$

Let the sum that Ben needs to give to Clark be ₹x such that they have the same amount.

$$47 - x = 25 + x \text{ or, } x = 11.$$

Choice (B)