

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

The mission of epistemology, the theory of knowledge, is to clarify what the conception of knowledge involves, how it is applied, and to explain why it has the features it does. And the idea of knowledge at issue here must, in the first instance at least, be construed in its modest sense to include also belief, conjecture, and the like. For it is misleading to call cognitive theory at large "epistemology" or "the theory of knowledge." Its range of concern includes not only knowledge proper but also rational belief, probability, plausibility, evidentiality and - additionally but not least - erotetics, the business of raising and resolving questions. It is this last area that aims to maintain and substantiate the utility of approaching epistemological issues from the angle of questions. As Aristotle already indicated, human inquiry is grounded in wonder. When matters are running along in their accustomed way, we generally do not puzzle about it and stop to ask questions. But when things are in any way out of the ordinary we puzzle over the reason why and seek for an explanation. And gradually our horizons expand. With increasing sophistication, we learn to be surprised by virtually all of it. We increasingly want to know what makes things tick - the ordinary as well as the extraordinary, so that questions gain an increasing prominence within epistemology in general.

Any profitable discussion of knowledge does well to begin by recognizing some basic linguistic facts about how the verb "to know" and its cognates actually function in the usual range of relevant discourse. For if one neglects these facts, one is well en route to "changing the subject" to talk about something different from that very conception that must remain at the center of our concern. It would clearly be self-defeating to turn away from knowledge as we in fact conceive and discuss it and deal with some sort of so-called knowledge different from that whose elucidation is the very reason of our deliberations. If a philosophical analysis is to elucidate a conception that is in actual use, it has no choice but to address itself to that usage and conform to its actual characteristics.

The first essential step is to recognize that "to know" has both a propositional and a procedural sense: there is the intellectual matter of "knowing that something or other is the case" (that-knowledge) and the practical matter of knowing how to perform some action and to go about realizing some end (how-to-knowledge). This distinction is crucial because only the former, intellectual and propositional mode of knowledge has generally been the focus of attention in traditional philosophical epistemology, rather than the latter, practical and performatory mode.

There is a wide variety of cognitive involvements: one can know, believe or accept (disbelieve or reject), conjecture or surmise or suspect, imagine or think about, assume or suppose, deem likely or unlikely, and so on. And there is also a wide variety of cognitive performances: realizing, noticing, remembering - and sometimes also their negatives: ignoring, forgetting, and so on. All of these cognitive circumstances belong to "the theory of knowledge" - to epistemology broadly speaking, which accordingly extends far beyond the domain of knowledge as such. But knowledge lies at the center of the range, and as the very expression indicates, the "theory of knowledge" focuses on knowledge.

The conception of "knowledge" itself represents a flexible and internally diversified idea. In general terms, it relates to the way in which persons can be said to have access to correct information. This can, of course, occur in rather different ways, so that there are various significantly distinguishable sorts of knowledge in terms of the kind of thing that is at issue:

1. Knowledge that something or other is the case (i.e., knowledge of facts).
2. Adverbial knowledge (i.e. knowing what, when, how, why, and so forth).
3. Knowledge by acquaintance with individuals or things.
4. Performatory (or "how-to") knowledge.

Q1. Which of the following statements about epistemology cannot be inferred to be true?

- a) Cognitive theory sometimes tends to be mistaken for epistemology.
- b) The inadequacy of epistemology in elucidating what the conceiving of knowledge involves forms the basis for cognitive theory. Your answer is correct
- c) One of the objectives of the theory of knowledge is to try to explain how the conception of knowledge can be applied.
- d) Eerotetics can help in corroborating the utility of advancing towards epistemological issues from the angle of questions.

Time spent / Accuracy Analysis

Time taken by you to answer this question	430
Avg. time spent on this question by all students	421
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	435
% of students who attempted this question	35.12
% of students who got the question right of those who attempted	53.2

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Number of words and Explanatory notes for RC:

Number of words: 652

Option (A): From "For it is misleading to call cognitive theory at large "epistemology" or "the theory of knowledge", it can be inferred that there is a tendency to see both cognitive theory and epistemology as interchangeable. This can be inferred. Hence, this is not the answer.

Option (B): Whether epistemology is adequate or not in explaining the conception of knowledge, has not been discussed in the passage. This cannot be inferred from the passage. Hence, this is the answer.

Option (C): From "The mission of epistemology, the theory of knowledge, is to clarify what the conception of knowledge involves, how it is applied,...", this option can be inferred to be true. Hence, this is not the answer.

Option (D): From "...erotics, the business of raising and resolving questions. It is this last area that aims to maintain and substantiate the utility of approaching epistemological issues from the angle of questions", this option can be inferred to be true. Hence, this is not the answer.

Choice (B)

undefined

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former, intellectual and propositional mode of knowledge has generally been the focus of attention in traditional philosophical epistemology, rather than the latter, practical and performatory mode.

There is a wide variety of cognitive involvements: one can know, believe or accept (disbelieve or reject), conjecture or surmise or suspect, imagine or think about, assume or suppose, deem likely or unlikely, and so on. And there is also a wide variety of cognitive performances: realizing, noticing, remembering - and sometimes also their negatives: ignoring, forgetting, and so on. All of these cognitive circumstances belong to "the theory of knowledge" - to epistemology broadly speaking, which accordingly extends far beyond the domain of knowledge as such. But knowledge lies at the center of the range, and as the very expression indicates, the "theory of knowledge" focuses on knowledge.

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3. Knowledge by acquaintance with individuals or things.
4. Performatory (or "how-to") knowledge.

Q2. What does the statement 'human inquiry is grounded in wonder' (para 1) imply?

- a) Humans start asking questions only when their curiosity gets the better of them.
- b) **Humans do not seek answers for the familiar and routine.** Your answer is correct
- c) Humans do not start inquiring about anything unless it makes them feel wonderful about themselves.
- d) Humans start questioning their own existence every time they come across things that are out of the ordinary.

Time spent / Accuracy Analysis

Time taken by you to answer this question	192
Avg. time spent on this question by all students	120
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	47
% of students who got the question right of those who attempted	47.19

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Number of words and Explanatory notes for RC:

Number of words: 652

The author states that when things are in any way out of the ordinary we puzzle over the reason and seek for an explanation. We increasingly want to know what makes things tick—the ordinary as well as the extraordinary, so that questions gain an increasing prominence within epistemology in general.

Option (A): It is not curiosity because of which humans start asking questions. It is because we are puzzled and we sought out the answers to the same. Hence, this is not the answer.

Option (B): From "When matters are running along in their accustomed way, we generally do not puzzle about it and stop to ask questions. But when things are in any way out of the ordinary we puzzle over the reason why and seek for an explanation", it can be inferred that humans do not seek answers about things that are common or ordinary. Hence, this is the answer.

Option (C): Humans start inquiring about things that are out of the ordinary and puzzle them. Not things that make them feel wonderful about themselves. Hence, this is not the answer.

Option (D): Humans start inquiring about things that are out of the ordinary and puzzle them. They do not question their own existence. Hence, this is not the answer.

Choice (B)

undefined

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Q3. "I know that robots will control humans in the future." We can infer that this statement can be classified under which of the following categories?

- a) Factual Knowledge
- b) **Adverbial Knowledge** Your answer is incorrect
- c) Performatory Knowledge
- d) None of the above

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	147
Avg. time spent on this question by all students	97
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	105
% of students who attempted this question	41.83
% of students who got the question right of those who attempted	18.91

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Number of words and Explanatory notes for RC:

Number of words: 652

"I know robots will control humans in the future." This statement is only a prediction or an anticipation about what might happen in the future. This does not translate to knowledge. Hence, it will not fall under any of the mentioned categories.

Choice (D)

undefined

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Q4. How is the intellectual matter of knowledge different from the practical matter of knowledge?

- a) The intellectual matter is only concerned with how the knowledge can be obtained while the practical matter is concerned with how the knowledge can be applied.
- b) **The intellectual matter is only concerned about the acquired knowledge irrespective of its utility while the practical matter is concerned with how the knowledge can be applied.**

practical matter is concerned about how the knowledge can be monetized.

c) The intellectual matter is concerned with what the knowledge is about while the practical matter is concerned with how that knowledge can be utilized. Your answer is correct

d) The intellectual matter is concerned with monetizing the knowledge while the practical matter is concerned about acquiring that knowledge.

Time spent / Accuracy Analysis

Time taken by you to answer this question	165
Avg. time spent on this question by all students	136
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	135
% of students who attempted this question	40.1
% of students who got the question right of those who attempted	60.41

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Number of words and Explanatory notes for RC:

Number of words: 652

The author states that there is the intellectual matter of "knowing that something or other is the case" (that-knowledge) and the practical matter of knowing how to perform some action and to go about realizing some end (how-to-knowledge).

Option (A): The intellectual matter is only concerned with the knowledge and not with how the knowledge is obtained. This is not the answer.

Option (B): This is false because the practical matter is concerned with how the knowledge can be used and it does not have to be monetized. Hence, this is not the answer.

Option (C): This is precisely what has been stated in the passage. Hence, this is true.
This is the answer.

Option (D): The intellectual matter is only concerned with what the knowledge is and is not concerned about monetizing it. Hence, this is not the answer. Choice (C)

undefined

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Q5. According to the passage, which of the following statements is true?

- a) Ignoring certain linguistic facts about how the verb 'to know' functions may lead to a digression from the main issue of concern in the field of epistemology. **Your answer is correct**
- b) Turning away from knowledge can be self-defeating because one would end up dealing with another sort of knowledge whose elucidation is the very reason of our deliberations.
- c) Elucidating a conception that is in actual use need not be strictly confined to that usage.
- d) One must acknowledge all basic linguistic facts about how the verb 'to know' and its cognates actually function.

Time spent / Accuracy Analysis

Time taken by you to answer this question	294
Avg. time spent on this question by all students	118
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	124
% of students who attempted this question	25.45
% of students who got the question right of those who attempted	27.03

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 652

The author states that any profitable discussion of knowledge does well to begin by recognizing some basic linguistic facts about how the verb 'to know' and its cognates actually function in the usual range of relevant discourse.

Option (A): From "For if one neglects these facts, one is well en route to "changing the subject" to talk about something different from that very conception that must remain at the center of our concern", we can infer that this is true. Hence, this is the answer.

Option (B): From "self-defeating to turn away from knowledge as we, in fact, conceive and discuss it and deal with some sort of so-called knowledge different from that whose elucidation is the very reason for being so such a theory", it is clear that this is false. Hence, this is not the answer.

Option (C): This is false because such a conception should strictly be confined to that usage. Hence, this is not the answer.

Option (D): One need not acknowledge all linguistic facts and instead, acknowledge only those which are in the usual range of relevant discourse. This is not true. Hence, this is not the answer.

Choice (A)

undefined

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Q6. Consider the following two activities:

- i. Contemplating the meaning of life.
- ii. Observing the people around while travelling by metro to the office.

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

- a) (i) is a cognitive involvement and (ii) is a cognitive performance. Your answer is correct
- b) (i) is a cognitive performance and (ii) is a cognitive involvement.
- c) Both (i) and (ii) are cognitive involvements.
- d) Both (i) and (ii) are cognitive performances.

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	VD
Avg. time spent on this question by students who got this question right	98
% of students who attempted this question	32.38
% of students who got the question right of those who attempted	63.43

[Video Solution](#)

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Number of words and Explanatory notes for RC:

Number of words: 652

Cognitive involvements include knowing, believing or accepting (disbelieving or rejecting), conjecturing or surmising or suspecting, imagining or thinking about, assuming or supposing, deeming likely or unlikely, and so on. Cognitive performances include realizing, noticing, remembering, ignoring, forgetting, and so on.

Statement i. "contemplating the meaning of life" is thinking/supposing about life. Therefore, it is a cognitive involvement.

Statement ii. "observing the people around while travelling by metro to the office" is noticing which is a cognitive performance. Choice (A)

undefined

DIRECTIONS for questions 7 to 9: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Computers have already proved better than people at playing chess and diagnosing diseases. But now intelligence researchers in Singapore have managed to teach industrial robots to assemble an IKEA chair - for the first time uniting the worlds of Allen keys and Alan Turing. Now that machines have mastered one of the most baffling ways of spending a Saturday afternoon, can it be long before Artificial Intelligence systems rise up and enslave humans in the silicon mines?

The research also holds a serious message. It highlights a deep truth about the limitations of automation. Machines excel at the sorts of abstract, cognitive tasks that, to people, signify intelligence - complex board games or differential calculus. But they struggle with physical jobs, such as navigating a cluttered room, which hardly seem to count as intelligence at all. Two IKEAbots pre-programmed by humans, took more than 20 minutes to assemble a chair that a person could knock together in a fraction of the time.

AI researchers call that observation Moravec's paradox which is, in fact, a fundamental truth. Physical dexterity is computationally harder than playing Go. That humans do not grasp this is a side-effect of evolution. Natural selection has had billions of years to attack the problem of manipulating the physical world, to the point where it feels effortless. Chess, by contrast, is less than 2,000 years old. People find it hard because their brains are not wired for it.

That is something to bear in mind when thinking about the much-hyped effects of AI and automation, especially as AI moves out of the abstract world of data and information and into the real world. On April 13th 2018, Elon Musk, the boss of Tesla, an electric-car firm, said that the production problems that have dogged his company's high-tech factory were partly the result of an overreliance on robots and automation. "Humans are underrated," he tweeted. Lots of jobs have physical aspects that robots struggle with. Machines may soon be able to drive delivery vans but they could fail to carry a parcel to a flat at the top of a flight of slippery stairs, especially if the garden was patrolled by a dog.

Today's AI systems are pattern-recognition engines, trained on thousands of examples in the hope that the rules they infer will continue to apply in the wider world. But they apply those rules blindly, without a human-like understanding of what they are doing or an ability to improvise a solution on the spot. Makers of self-driving cars worry constantly about how their machines will perform in "edge cases"- complicated situations that cannot be foreseen during training. The main limitation of AI is that it learns from given data. There is no other way that knowledge can be integrated, unlike human learning. This means that any inaccuracies in the data will be reflected in the results.

Q7. Which of the following is an apt definition of Moravec's Paradox as can be inferred from the passage?

- a) Low-level sensorimotor skills require very little computation, but high-level reasoning requires enormous computational resources.

- b) Easy problems are easy because they require very little computation while difficult problems are hard because they require enormous computational resources.
- c) Performing complex cognitive tasks requires fewer computational resources than performing simple physical tasks.
- d) It is easier for computers to exhibit adult level performance on intelligence tests or games like checkers, but it is difficult for humans to ace a game of chess or Go.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	176
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	303
% of students who attempted this question	54.75
% of students who got the question right of those who attempted	60.31

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 475

Option A: Machines excel at the sorts of abstract, cognitive tasks that, to people, signify intelligence – complex board games, say, or differential calculus. But they struggle with physical jobs, such as navigating a cluttered room, which are so simple that they hardly seem to count as intelligence at all. Choice A is distorted. Sensorimotor skills need more computation as compared to abstract, cognitive tasks. {All activity/responses require computational skills (... a fundamental truth: Physical dexterity is computationally harder than playing Go). What choice A is referring to as sensorimotor skills are what the author says are computational skills refined over the millenia of evolution to the point that they seem spontaneous or dead easy for humans to perform. Plus the fact that human computation (in what choice A refers to as sensorimotor skills) takes into account grey areas/ probabilities/ emotional impact etc., things that computers can't handle.} Choice A is not the answer.

Option B: Choice B would be a simplified version of Moravec's Paradox if it read: Easy problems are hard and require enormous computational resources while difficult problems are easy and require very little computation. As it is, choice B is incorrect.

Option C: Physical dexterity is computationally harder than playing Go. Machines excel at the sorts of abstract, cognitive tasks that, to people, signify intelligence – complex board games, say, or differential calculus. But they struggle with physical jobs, such as navigating a cluttered room, which are so simple. Choice C is the correct answer.

Option D: Choice D does not capture the paradox correctly. Choice D would be correct if the second half read: ...and difficult or impossible to give them the skills of a human when it comes to perception and mobility. Choice D is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 7 to 9: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Computers have already proved better than people at playing chess and diagnosing diseases. But now intelligence researchers in Singapore have managed to teach industrial robots to assemble an IKEA chair - for the first time uniting the worlds of Allen keys and Alan Turing. Now that machines have mastered one of the most baffling ways of spending a Saturday afternoon, can it be long before Artificial Intelligence systems rise up and enslave humans in the silicon mines?

The research also holds a serious message. It highlights a deep truth about the limitations of automation. Machines excel at the sorts of abstract, cognitive tasks that, to people, signify intelligence - complex board games or differential calculus. But

they struggle with physical jobs, such as navigating a cluttered room, which hardly seem to count as intelligence at all. Two IKEAbots pre-programmed by humans, took more than 20 minutes to assemble a chair that a person could knock together in a fraction of the time.

AI researchers call that observation Moravec's paradox which is, in fact, a fundamental truth. Physical dexterity is computationally harder than playing Go. That humans do not grasp this is a side-effect of evolution. Natural selection has had billions of years to attack the problem of manipulating the physical world, to the point where it feels effortless. Chess, by contrast, is less than 2,000 years old. People find it hard because their brains are not wired for it.

That is something to bear in mind when thinking about the much-hyped effects of AI and automation, especially as AI moves out of the abstract world of data and information and into the real world. On April 13th 2018, Elon Musk, the boss of Tesla, an electric-car firm, said that the production problems that have dogged his company's high-tech factory were partly the result of an overreliance on robots and automation. "Humans are underrated," he tweeted. Lots of jobs have physical aspects that robots struggle with. Machines may soon be able to drive delivery vans but they could fail to carry a parcel to a flat at the top of a flight of slippery stairs, especially if the garden was patrolled by a dog.

Today's AI systems are pattern-recognition engines, trained on thousands of examples in the hope that the rules they infer will continue to apply in the wider world. But they apply those rules blindly, without a human-like understanding of what they are doing or an ability to improvise a solution on the spot. Makers of self-driving cars worry constantly about how their machines will perform in "edge cases"- complicated situations that cannot be foreseen during training. The main limitation of AI is that it learns from given data. There is no other way that knowledge can be integrated, unlike human learning. This means that any inaccuracies in the data will be reflected in the results.

Q8. Which of the following statements best echoes the viewpoint of the author of the passage?

- a) While research into multi-tasking machines and AI is heating up, the jury is still out on whether true human level cognition is possible or desirable in machines. Your answer is incorrect
- b) With the most recent breakthrough in robotics, it is clear that the time of humans as masters of planet Earth has come to an end.
- c) Furniture-assembly helps explain why a computer could one day do everything a human can and more.
- d) Today's AI systems are limited in many ways.

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	336
Avg. time spent on this question by all students	96
Difficulty Level	E
Avg. time spent on this question by students who got this question right	96
% of students who attempted this question	56.55
% of students who got the question right of those who attempted	50.56

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 475

Option A: Choice A seems close but it is incorrect. If the jury is (still) out on a subject, it means that people do not yet know the answer. But the passage states that machines struggle with physical jobs, such as navigating a cluttered room. The passage goes on to elaborate on the limitations of AI. Also "true human level cognition is possible (or desirable) in machines" is out of scope of the discussion.

Option B: Now that machines have mastered one of the most baffling ways of spending a Saturday afternoon, **can it be long before** Artificial Intelligence systems rise up and enslave humans in the silicon mines? The research also holds a serious message. It highlights a deep truth about the limitations of automation. So choice B (time of humans as masters of planet Earth has **come to an end**) cannot be the answer.

Option C: Now a group of artificial-intelligence researchers in Singapore have managed to teach industrial robots to assemble an IKEA chair – for the first time uniting the worlds of Allen keys and Alan Turing. But choice C which is positive in tone fails to capture the viewpoint of the author in the remaining paras of the passage viz, limitations of AI and the overreliance on robots and automation. Lots of jobs have physical aspects that robots struggle with. Choice C is not the answer.

Option D: The research highlights a deep truth about the limitations of automation. ... much-hyped effects of AI and automation, especially as AI moves out of the abstract world of data and information and into the real world, and the overreliance on robots and automation. The last para focuses on the limitations of AI systems. Choice D is the answer.

Choice (D)

undefined

DIRECTIONS for questions 7 to 9: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

Computers have already proved better than people at playing chess and diagnosing diseases. But now intelligence researchers in Singapore have managed to teach industrial robots to assemble an IKEA chair - for the first time uniting the worlds of Allen keys and Alan Turing. Now that machines have mastered one of the most baffling ways of spending a Saturday afternoon, can it be long before Artificial Intelligence systems rise up and enslave humans in the silicon mines?

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AI researchers call that observation Moravec's paradox which is, in fact, a fundamental truth. Physical dexterity is computationally harder than playing Go. That humans do not grasp this is a side-effect of evolution. Natural selection has had billions of years to attack the problem of manipulating the physical world, to the point where it feels effortless. Chess, by contrast, is less than 2,000 years old. People find it hard because their brains are not wired for it.

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an electric-car firm, said that the production problems that have dogged his company's high-tech factory were partly the result of an overreliance on robots and automation. "Humans are underrated," he tweeted. Lots of jobs have physical aspects that robots struggle with. Machines may soon be able to drive delivery vans but they could fail to carry a parcel to a flat at the top of a flight of slippery stairs, especially if the garden was patrolled by a dog.

Today's AI systems are pattern-recognition engines, trained on thousands of examples in the hope that the rules they infer will continue to apply in the wider world. But they apply those rules blindly, without a human-like understanding of what they are doing or an ability to improvise a solution on the spot. Makers of self-driving cars worry constantly about how their machines will perform in "edge cases"- complicated situations that cannot be foreseen during training. The main limitation of AI is that it learns from given data. There is no other way that knowledge can be integrated, unlike human learning. This means that any inaccuracies in the data will be reflected in the results.

Q9. All of the following are the shortcomings of Artificial Intelligence discussed in the passage EXCEPT?

- a) Artificial Intelligence, a product of pattern recognition, is only as smart as the data sets served to it.
- b) As soon as a computer or a machine achieves a task of AI, then the same task ceases to count as "AI". Your answer is correct
- c) Humans feed the AI system with all the new information required for it to learn in the first place and this form of learning is not as expansive as human learning.
- d) While machines can beat people at Go and sift through data much faster than an individual, we still don't have a robot that can efficiently navigate a cluttered room or a flight of slippery stairs.

Time spent / Accuracy Analysis

Time taken by you to answer this question	91
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	90
% of students who attempted this question	55.51
% of students who got the question right of those who attempted	73.23

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 475

Options A and C: Two of the IKEAbots, pre-programmed by humans, took more than 20 minutes to assemble a chair that a person could knock together in a fraction of the time.....Today's AI systems are pattern-recognition engines. The main limitation of AI is that it learns from given data. There is no other way that knowledge can be integrated, unlike human learning. AI systems apply those rules blindly, without a human-like understanding of what they are doing or an ability to improvise a solution on the spot. So choices A and C are true and these are not the answers.

Option B: Choice B cannot be deduced from the passage and is the answer.

Option D: Machines excel at the sorts of abstract, cognitive tasks that, to people, signify intelligence – complex board games or differential calculus. But they struggle with physical jobs, such as navigating a cluttered room, which are so simple that they hardly seem to count as intelligence at all. Machines could fail to carry a parcel to a flat at the top of a flight of slippery stairs, especially if the garden was patrolled by a dog. Hence choice D is also correct and is not the answer.

Choice (B)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

UNTIL recently, Morriston Comprehensive was one of the worst schools in Wales, which in turn has the worst education system in Britain. But in 2015, Martin Franklin, the head teacher, introduced a hawklike data-based monitoring system. Parents receive a colour-coded memo every two months, showing their child's progress towards various goals, as well as their attendance. Pupils who do well are rewarded with gift tokens. Exam results are on the up.

The outlook for Welsh education as a whole is, however, less sunny. Many date the country's difficulties back to changes made after the devolution of some political powers, including control of all education policy bar teachers' pay, from Westminster, London to Cardiff, Wales in 1999. At the time, Welsh education was set up in a broadly similar way to that in England. But, in 2001, a Labour-Liberal Democrat coalition scrapped school league tables. They placed an unnecessary burden on schools, the education minister explained. And, in 2004, a Labour government abolished national tests for 11- and 14-year-olds.

Standards duly plummeted. Getting rid of league tables alone cost the average pupil two grades at GCSE, the exams taken at 16, according to research by Simon Burgess of the University of Bristol. Yet it was not until Wales entered the OECD's Programme for International Student Assessment (PISA) in 2006 that the extent of the decline became clear. The results of Welsh 15-year-olds were similar to those of their peers in Latvia and the Czech Republic, and far below those in England, Scotland and Northern Ireland.

Few disagree that Welsh schools are in serious need of improvement. Much of the past ten years has been spent trying to catch up with the rest of Britain. Changes include moving some training and administrative support from small local authorities to new regional organisations, and channelling more funding and help to the weakest schools, including Morriston. In 2013, new literacy and numeracy tests began. In 2015, a school-categorisation system vaguely akin to league tables was brought back.

Still, few had much hope that enough had changed to improve performance in the latest round of PISA tests, whose results were released last year. Sure enough, Wales was still far behind Finland, Singapore and Japan, where students have always and continue to ace the test. Discussion of poor PISA performance dominated a recent head teachers' conference, says Mr Franklin. The OECD has warned of "reform fatigue".

PISA has its opponents but not in Wales. Some say that it encourages countries to engage in short-term fixes as they deal with a narrow curriculum and too standardised a testing process to climb the rankings. Others complain that it is not right to compare systems using average scores from random schools, and also add that cultural differences make the tests unfair.

What next? A new Labour-Liberal Democrat government in Wales, formed last year, has grand plans. First, it hopes to improve the quality of teaching. A recent report by Estyn, the Welsh schools inspectorate, drily noted that "teaching is one of the weakest aspects of [education] provision." The government wants trainee teachers to spend more time in the classroom and less in the lecture hall, and will introduce new professional standards that emphasize their duty to keep improving once they gain accreditation. "The biggest learner in the classroom should be the teacher," chirps Kirsty Williams, the Lib Dem education secretary.

Second, a new curriculum will be introduced in 2018. It will seek to break down subject boundaries, free teachers to teach how they see fit and subject schools to lighter monitoring. Ms Williams flags the example of Finland which does not idolize highly stressful school systems and Canada, which, like Wales, has a bilingual education system, and runs excellent schools.

Yet there is another, less promising forerunner. Scotland recently adopted a more open-ended curriculum, with little success. Although it once had one of the best education systems in the world, Scotland's PISA results have been on a downward trend, which accelerated in the most recent round. Many blame its "Curriculum for Excellence", which was phased in from 2010, and on which the proposed new Welsh curriculum is based.

Despite supposedly having been given more freedom, teachers in Scotland complain that they are overwhelmed by the number of outcomes they must show they are meeting and complain that they have little time to spend on the basics.

Ms Williams argues that Wales already has a strong focus on basic standards, and that it will develop an assessment system that is careful not to overwork teachers. But Scotland provides a lesson worth heeding.

Q10. Which of the following is not a reason that the author ascribes to the less than stellar situation of Welsh education between 2000 and 2006?

- a) The elimination of school league tables and certain national tests for school kids.
- b) Transfer or delegation of political power to a lower level.
- c) The entry of Wales in the OECD's Programme for International Student Assessment.
- d) A shift in the control of all education policy bar teachers' pay from Westminster to Cardiff.

Time spent / Accuracy Analysis

Time taken by you to answer this question	27
Avg. time spent on this question by all students	381
Difficulty Level	D
Avg. time spent on this question by students who got this question right	376
% of students who attempted this question	46.62
% of students who got the question right of those who attempted	45.63

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 761

The outlook for Welsh education as a whole is, however, less sunny.

Option A: But in 2001, a Labour-Liberal Democrat coalition scrapped school league tables (they placed an unnecessary burden on schools, the education minister explained). And, in 2004, a Labour government abolished national tests for 11- and 14-year-olds. Choice A is a reason and is not the answer.

Option B: Many date the country's difficulties back to changes made after the devolution of some political powers. 'Devolution' means the transfer or delegation of power to a lower level, especially by central government to local or regional administration. Hence choice B is a reason and is not the answer.

Option C: Yet it was not until Wales entered the OECD's Programme for International Student Assessment (PISA) in 2006 that the extent of the decline became clear. But choice C is not the reason for the 'less sunny' status of Welsh education. Hence choice C is the answer.

Option D: Many date the country's difficulties back to changes made after control of all education policy bar teachers' pay (shifted) from Westminster, London to Cardiff, Wales in 1999. Choice D is a reason and is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

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The outlook for Welsh education as a whole is, however, less sunny. Many date the country's difficulties back to changes made after the devolution of some political powers, including control of all education policy bar teachers' pay, from Westminster, London to Cardiff, Wales in 1999. At the time, Welsh education was set up in a broadly similar way to that in England. But, in 2001, a Labour-Liberal Democrat coalition scrapped school league tables. They placed an unnecessary burden on schools, the education minister explained. And, in 2004, a Labour government abolished national tests for 11- and 14-year-olds.

Standards duly plummeted. Getting rid of league tables alone cost the average pupil two grades at GCSE, the exams taken at 16, according to research by Simon Burgess of the University of Bristol. Yet it was not until Wales entered the OECD's Programme for International Student Assessment (PISA) in 2006 that the extent of the decline became clear. The results of Welsh 15-year-olds were similar to those of their peers in Latvia and the Czech Republic, and far below those in England, Scotland and Northern Ireland.

Few disagree that Welsh schools are in serious need of improvement. Much of the past ten years has been spent trying to catch up with the rest of Britain. Changes include moving some training and administrative support from small local authorities to new regional organisations, and channelling more funding and help to the weakest schools, including Morriston. In 2013, new literacy and numeracy tests began. In 2015, a school-categorisation system vaguely akin to league tables was brought back.

Still, few had much hope that enough had changed to improve performance in the latest round of PISA tests, whose results

were released last year. Sure enough, Wales was still far behind Finland, Singapore and Japan, where students have always and continue to ace the test. Discussion of poor PISA performance dominated a recent head teachers' conference, says Mr Franklin. The OECD has warned of "reform fatigue".

PISA has its opponents but not in Wales. Some say that it encourages countries to engage in short-term fixes as they deal with a narrow curriculum and too standardised a testing process to climb the rankings. Others complain that it is not right to compare systems using average scores from random schools, and also add that cultural differences make the tests unfair.

What next? A new Labour-Liberal Democrat government in Wales, formed last year, has grand plans. First, it hopes to improve the quality of teaching. A recent report by Estyn, the Welsh schools inspectorate, drily noted that "teaching is one of the weakest aspects of [education] provision." The government wants trainee teachers to spend more time in the classroom and less in the lecture hall, and will introduce new professional standards that emphasize their duty to keep improving once they gain accreditation. "The biggest learner in the classroom should be the teacher," chirps Kirsty Williams, the Lib Dem education secretary.

Second, a new curriculum will be introduced in 2018. It will seek to break down subject boundaries, free teachers to teach how they see fit and subject schools to lighter monitoring. Ms Williams flags the example of Finland which does not idolize highly stressful school systems and Canada, which, like Wales, has a bilingual education system, and runs excellent schools.

Yet there is another, less promising forerunner. Scotland recently adopted a more open-ended curriculum, with little success. Although it once had one of the best education systems in the world, Scotland's PISA results have been on a downward trend, which accelerated in the most recent round. Many blame its "Curriculum for Excellence", which was phased in from 2010, and on which the proposed new Welsh curriculum is based.

Despite supposedly having been given more freedom, teachers in Scotland complain that they are overwhelmed by the number of outcomes they must show they are meeting and complain that they have little time to spend on the basics.

Ms Williams argues that Wales already has a strong focus on basic standards, and that it will develop an assessment system that is careful not to overwork teachers. But Scotland provides a lesson worth heeding.

Q11. According to the passage, how did the removal of the school league tables in 2001 affect the average Welsh student?

- a) The move led to the creation of a parallel school-categorisation system throughout Wales that was popular among students and not burdensome on schools.
- b) The academic standards of students across Wales declined as was evident in the fall in their grades at GCSE.
- c) The performance of students in top Welsh schools plummeted while students in less popular schools began to shine academically as was evident in their results at GCSE.
- d) The performance of Welsh students in GCSE equalled that of their peers in Latvia and the Czech Republic in the same for the first time.

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	125
Difficulty Level	M
Avg. time spent on this question by students who got this question right	121
% of students who attempted this question	46.97
% of students who got the question right of those who attempted	71.93

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 761

Option A: A Labour-Liberal Democrat coalition scrapped school league tables (they placed an unnecessary burden on schools, the education minister explained). But choice A is not specific to the question. In 2015, a school-categorisation system vaguely akin to league tables was brought back.

Option B: Standards duly plummeted. Getting rid of league tables alone cost the average pupil two grades at GCSE, the exams taken at 16, according to research by Simon Burgess of the University of Bristol. Hence choice B is the answer.

Option C: The comparison of students in top schools and less popular schools in Wales has not been mentioned in the passage. Academic standards plummeted across all schools in Wales. Hence choice C is not the answer.

Option D: Choice D sounds positive. the extent of the decline became clear. The results of Welsh 15-year-olds were similar to those of their peers in Latvia and the Czech Republic, and far below those in England, Scotland and Northern Ireland. "for the first time" in choice D is out of scope.

Choice (B)

undefined

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improve the quality of teaching. A recent report by Estyn, the Welsh schools inspectorate, drily noted that “teaching is one of the weakest aspects of [education] provision.” The government wants trainee teachers to spend more time in the classroom and less in the lecture hall, and will introduce new professional standards that emphasize their duty to keep improving once they gain accreditation. “The biggest learner in the classroom should be the teacher,” chirps Kirsty Williams, the Lib Dem education secretary.

Second, a new curriculum will be introduced in 2018. It will seek to break down subject boundaries, free teachers to teach how they see fit and subject schools to lighter monitoring. Ms Williams flags the example of Finland which does not idolize highly stressful school systems and Canada, which, like Wales, has a bilingual education system, and runs excellent schools.

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Despite supposedly having been given more freedom, teachers in Scotland complain that they are overwhelmed by the number of outcomes they must show they are meeting and complain that they have little time to spend on the basics.

Ms Williams argues that Wales already has a strong focus on basic standards, and that it will develop an assessment system that is careful not to overwork teachers. But Scotland provides a lesson worth heeding.

Q12. Which of the following does not figure in the grand plans of the new Labour-Liberal Democrat government to improve the worst education system in Britain?

- a) Stress on the teachers' need for self-improvement and make them spend more time in the classroom.
- b) Combine high professional standards with less stringent oversight.
- c) Provide teachers more freedom to experiment with curriculum content and classroom delivery.
- d) Delay selection of students to enable slow starters to catch up and idolize less stressful school systems.

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	137
Difficulty Level	M
Avg. time spent on this question by students who got this question right	139
% of students who attempted this question	44.98
% of students who got the question right of those who attempted	71.48

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 761

Morrison Comprehensive was one of the worst schools in Wales, which in turn has the worst education system in Britain. A new Labour-Liberal Democrat government, formed last year, has grand plans.

Option A: A recent report by Estyn, the Welsh schools inspectorate, drily noted that "teaching is one of the weakest aspects of [education] provision." The government wants trainee teachers to spend more time in the classroom and less in the lecture hall and emphasizes their duty to keep improving once they gain accreditation. The biggest learner in the classroom should be the teacher. Hence choice A is true.

Option B: A new Labour-Liberal Democrat government, formed last year, hopes to improve the quality of teaching. It will introduce new professional standards in teaching and subject schools to lighter monitoring. So choice B is true and is not the answer.

Option C: A new curriculum will be introduced in 2018. It will seek to break down subject boundaries, free teachers to teach how they see fit ... Hence choice C is also true and is not the answer.

Option D: The first part of choice D has not been mentioned in the passage even though the second part is true. Ms Williams flags the example of Finland which does not idolize highly stressful school systems. Hence choice D is the correct answer.

Choice (D)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

UNTIL recently, Morrison Comprehensive was one of the worst schools in Wales, which in turn has the worst education system in Britain. But in 2015, Martin Franklin, the head teacher, introduced a hawklike data-based monitoring system. Parents receive a colour-coded memo every two months, showing their child's progress towards various goals, as well as their attendance. Pupils who do well are rewarded with gift tokens. Exam results are on the up.

The outlook for Welsh education as a whole is, however, less sunny. Many date the country's difficulties back to changes made after the devolution of some political powers, including control of all education policy bar teachers' pay, from Westminster, London to Cardiff, Wales in 1999. At the time, Welsh education was set up in a broadly similar way to that in England. But, in 2001, a Labour-Liberal Democrat coalition scrapped school league tables. They placed an unnecessary burden on schools, the education minister explained. And, in 2004, a Labour government abolished national tests for 11- and 14-year-olds.

Standards duly plummeted. Getting rid of league tables alone cost the average pupil two grades at GCSE, the exams taken at 16, according to research by Simon Burgess of the University of Bristol. Yet it was not until Wales entered the OECD's Programme for International Student Assessment (PISA) in 2006 that the extent of the decline became clear. The results of Welsh 15-year-olds were similar to those of their peers in Latvia and the Czech Republic, and far below those in England, Scotland and Northern Ireland.

Few disagree that Welsh schools are in serious need of improvement. Much of the past ten years has been spent trying to catch up with the rest of Britain. Changes include moving some training and administrative support from small local authorities to new regional organisations, and channelling more funding and help to the weakest schools, including Morriston. In 2013, new literacy and numeracy tests began. In 2015, a school-categorisation system vaguely akin to league tables was brought back.

Still, few had much hope that enough had changed to improve performance in the latest round of PISA tests, whose results were released last year. Sure enough, Wales was still far behind Finland, Singapore and Japan, where students have always and continue to ace the test. Discussion of poor PISA performance dominated a recent head teachers' conference, says Mr Franklin. The OECD has warned of "reform fatigue".

PISA has its opponents but not in Wales. Some say that it encourages countries to engage in short-term fixes as they deal with a narrow curriculum and too standardised a testing process to climb the rankings. Others complain that it is not right to compare systems using average scores from random schools, and also add that cultural differences make the tests unfair.

What next? A new Labour-Liberal Democrat government in Wales, formed last year, has grand plans. First, it hopes to improve the quality of teaching. A recent report by Estyn, the Welsh schools inspectorate, drily noted that "teaching is one of the weakest aspects of [education] provision." The government wants trainee teachers to spend more time in the classroom and less in the lecture hall, and will introduce new professional standards that emphasize their duty to keep improving once they gain accreditation. "The biggest learner in the classroom should be the teacher," chirps Kirsty Williams, the Lib Dem education secretary.

Second, a new curriculum will be introduced in 2018. It will seek to break down subject boundaries, free teachers to teach how they see fit and subject schools to lighter monitoring. Ms Williams flags the example of Finland which does not idolize highly stressful school systems and Canada, which, like Wales, has a bilingual education system, and runs excellent schools.

Yet there is another, less promising forerunner. Scotland recently adopted a more open-ended curriculum, with little success. Although it once had one of the best education systems in the world, Scotland's PISA results have been on a downward trend, which accelerated in the most recent round. Many blame its "Curriculum for Excellence", which was phased in from 2010, and on which the proposed new Welsh curriculum is based.

Despite supposedly having been given more freedom, teachers in Scotland complain that they are overwhelmed by the number of outcomes they must show they are meeting and complain that they have little time to spend on the basics.

Ms Williams argues that Wales already has a strong focus on basic standards, and that it will develop an assessment system that is careful not to overwork teachers. But Scotland provides a lesson worth heeding.

Q13. Which of the following countries or regions has consistently excelled in the Programme for International Student Assessment (PISA)?

- a) **Scotland**
- b) **Canada**
- c) **Japan**
- d) Northern Ireland

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	87
Difficulty Level	M
Avg. time spent on this question by students who got this question right	80
% of students who attempted this question	51.37
% of students who got the question right of those who attempted	71.16

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 761

Option A: Although Scotland once had one of the best education systems in the world, Scotland's PISA results have been on a downward trend, which accelerated in the most recent round. Hence choice A is incorrect.

Option B: Canada, like Wales, has a bilingual education system, and runs excellent schools. But its performance in PISA has not been mentioned in the passage. Choice B is not the answer.

Option C: Wales was still far behind Finland, Singapore and Japan, where students have always and continue to ace the (PISA) test. So we can say that choice C is correct.

Option D: The PISA results of Welsh 15-year-olds were similar to those of their peers in Latvia and the Czech Republic, and far below those in England, Scotland and Northern Ireland. But Northern Ireland has not been mentioned in the passage as a country that has consistently excelled in the Programme for International Student Assessment (PISA). Choice (C)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

UNTIL recently, Morriston Comprehensive was one of the worst schools in Wales, which in turn has the worst education system in Britain. But in 2015, Martin Franklin, the head teacher, introduced a hawklike data-based monitoring system. Parents receive a colour-coded memo every two months, showing their child's progress towards various goals, as well as their attendance. Pupils who do well are rewarded with gift tokens. Exam results are on the up.

The outlook for Welsh education as a whole is, however, less sunny. Many date the country's difficulties back to changes made after the devolution of some political powers, including control of all education policy bar teachers' pay, from Westminster, London to Cardiff, Wales in 1999. At the time, Welsh education was set up in a broadly similar way to that in England. But, in 2001, a Labour-Liberal Democrat coalition scrapped school league tables. They placed an unnecessary burden on schools, the education minister explained. And, in 2004, a Labour government abolished national tests for 11- and 14-year-olds.

Standards duly plummeted. Getting rid of league tables alone cost the average pupil two grades at GCSE, the exams taken at 16, according to research by Simon Burgess of the University of Bristol. Yet it was not until Wales entered the OECD's Programme for International Student Assessment (PISA) in 2006 that the extent of the decline became clear. The results of Welsh 15-year-olds were similar to those of their peers in Latvia and the Czech Republic, and far below those in England, Scotland and Northern Ireland.

Few disagree that Welsh schools are in serious need of improvement. Much of the past ten years has been spent trying to catch up with the rest of Britain. Changes include moving some training and administrative support from small local authorities to new regional organisations, and channelling more funding and help to the weakest schools, including Morriston. In 2013, new literacy and numeracy tests began. In 2015, a school-categorisation system vaguely akin to league tables was brought back.

Still, few had much hope that enough had changed to improve performance in the latest round of PISA tests, whose results were released last year. Sure enough, Wales was still far behind Finland, Singapore and Japan, where students have always and continue to ace the test. Discussion of poor PISA performance dominated a recent head teachers' conference, says Mr Franklin. The OECD has warned of "reform fatigue".

PISA has its opponents but not in Wales. Some say that it encourages countries to engage in short-term fixes as they deal with a narrow curriculum and too standardised a testing process to climb the rankings. Others complain that it is not right to compare systems using average scores from random schools, and also add that cultural differences make the tests unfair.

What next? A new Labour-Liberal Democrat government in Wales, formed last year, has grand plans. First, it hopes to improve the quality of teaching. A recent report by Estyn, the Welsh schools inspectorate, drily noted that "teaching is one of the weakest aspects of [education] provision." The government wants trainee teachers to spend more time in the classroom and less in the lecture hall, and will introduce new professional standards that emphasize their duty to keep improving once they gain accreditation. "The biggest learner in the classroom should be the teacher," chirps Kirsty Williams, the Lib Dem education secretary.

Second, a new curriculum will be introduced in 2018. It will seek to break down subject boundaries, free teachers to teach how they see fit and subject schools to lighter monitoring. Ms Williams flags the example of Finland which does not idolize highly stressful school systems and Canada, which, like Wales, has a bilingual education system, and runs excellent schools.

Yet there is another, less promising forerunner. Scotland recently adopted a more open-ended curriculum, with little success. Although it once had one of the best education systems in the world, Scotland's PISA results have been on a downward trend, which accelerated in the most recent round. Many blame its "Curriculum for Excellence", which was phased in from 2010, and on which the proposed new Welsh curriculum is based.

Despite supposedly having been given more freedom, teachers in Scotland complain that they are overwhelmed by the number of outcomes they must show they are meeting and complain that they have little time to spend on the basics.

Ms Williams argues that Wales already has a strong focus on basic standards, and that it will develop an assessment system that is careful not to overwork teachers. But Scotland provides a lesson worth heeding.

Q14. "Yet, there is another, less promising forerunner." (para 9). What prompts the use of 'less promising'?

- a) Increasing teachers' responsibilities without having focussed on basic teaching elements is a risky approach.
- b) Welsh schools will not make up for the 'lost decade' to climb in the PISA league.
- c) Unlike Scotland, Wales already focuses on basic standards and hence it would be futile for Wales to implement Scotland's "Curriculum for Excellence" in her schools.
- d) Welsh and Scottish schools are wrestling with the conundrum of whether they should consider not using PISA as the litmus test for academic success.

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	116
Difficulty Level	D
Avg. time spent on this question by students who got this question right	112
% of students who attempted this question	38.57
% of students who got the question right of those who attempted	46.08

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 761

Option A: Yet there is another, less promising forerunner. Scotland recently adopted a more open-ended curriculum, with little success. The penultimate para of the passage focuses on the limitations of Scotland's "for Excellence" upon which the proposed new Welsh Curriculum curriculum is based. Teachers in Scotland complain that they are overwhelmed by the number of outcomes they must show they are meeting and complain that they have little time to spend on the basics. So choice A is the correct answer.

Option B: The passage ends with the sentence: But Scotland provides a lesson worth heeding. The passage explains the struggle to improve the worst education system in Britain. However, choice B sounds too negative and is out of context. Choice B is not the answer.

Option C: Choice C is distorted. It has a wrong cause-effect relationship. Some supporters of the (scottish) curriculum confess that the attempt to spread the teaching of literacy and numeracy across different subjects has led to too little time being spent on the basics. But the open-ended curriculum had other objectives which were supposed to be met. In Scotland, the open-ended curriculum did not meet with success. This fact is not evident in choice C.

Option D: Choice D is incorrect. PISA has its opponents but not in Wales. Choice D is out of context.

Choice (A)

undefined

DIRECTIONS for questions 10 to 15: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

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Ms Williams argues that Wales already has a strong focus on basic standards, and that it will develop an assessment system that is careful not to overwork teachers. But Scotland provides a lesson worth heeding.

Q15. All of the following are possible reasons, which can be inferred from the passage, for opposing the use of the Programme for International Student Assessment in schools EXCEPT?

Identify all that apply and enter the corresponding number in the input box given below. You must enter your answer in increasing order only. For example, if you think that (1) and (4) apply, then enter 14 (but not 41) in the input box.

1. The purpose of school gets reduced to passing exams.
2. The cultural reasons behind the success of certain countries in the PISA may not be given due consideration.
3. PISA excludes children with disabilities.
4. Countries may make use of quick fixes to avoid a slip in the PISA rankings.
5. Questions in the PISA tests when translated into different languages can be easily misinterpreted by students.

You did not answer this question

[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	146
Difficulty Level	D
Avg. time spent on this question by students who got this question right	164
% of students who attempted this question	30.81
% of students who got the question right of those who attempted	12.43

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 761

Refer to para 6. PISA has its opponents.

Statement 2: Others complain that it is not right to compare systems using average scores from random schools, and also add that cultural differences make the tests unfair. Hence statement 2 is a reason for opposing the use of the Programme for International Student Assessment.

Statement 4: Some say that it encourages countries to engage in short-term fixes as they deal with a narrow curriculum and too standardised a testing process to climb the rankings.

Statement 1 cannot be inferred. From “Countries deal with a narrow curriculum and too standardised a testing process to climb the rankings”, we cannot say that the purpose of school gets reduced to passing exams.

Statements 3 and 5 have not been mentioned as reasons.

Hence the answer is (135).

Ans: (135)

undefined

DIRECTIONS for questions 16 to 18: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

John Paul Lederach advances our understanding of the role of art and music in peace-building. His work with fractured

communities emphasizes the restoration of voice, a concept he finds particularly resonant with people who are struggling to repair their violent communities. What “voice” - understood both as the individual regaining his or her voice, and the community engaging in meaningful conversation - requires is “a container or space within which people [feel] safe but [are] also close enough to hear and receive the echo of each other’s voices”.

The particular metaphor Lederach favours in his representations of peace processes is one that brings together voice and container: the Tibetan singing bowl. He observes that social healing, like musical resonance, emerges from the interaction of many vibrations, individual and collective, held within a community context. Social healing and reconciliation emerge in and around the container that holds collective processes. ... The first distinguishing characteristic that the bowl shares with sound is circular movement: “[g]oing in circles and repeating them over and again is not,” he insists, “... a movement of going nowhere,” but has instead “a ritualistic quality ... creating a certain kind of space and moment”. The second is the container itself: “the bowl creates the space or location from which the sound is coaxed and held, but in terms of movement the sensation is one of going deep, made possible by the circling”. “Deepening becomes a directional focus of the container,” says Lederach. The third directional characteristic that makes the bowl a compelling metaphor is rising: “[s]ound not only seems to rise from the bowl,” he explains; “it expands, moves out, touches and surrounds the space within its reach. Sound moves in all directions and offers the experience of “feelings of being touched and held”.

Circling, deepening, and rising are all aspects of percussion that make instruments like drums and the singing bowl often function as “the heartbeat” of musical performances. They are also important aspects of the genuine, voluntary, non-imposed community reconciliation that Lederach prefers to discuss as “conflict transformation.” Going around, repeating over and over, is a way of gathering grassroots support within a community; each time an outreach effort is made, space is created for community members who had previously not been involved to join the movement. The descending movement can be understood as a way of describing the process of developing, through a repetition that may well become ritualized, an emotional loyalty to something that starts out as a social commitment - internalizing the peace-building ambition. And the rising movement can similarly be understood as the inexorable pressure that a fully committed, mobilized grassroots community can exert on a wider population - regional, national, or international.

Q16. Why does the author make a mention of the Tibetan singing bowl metaphor in the passage?

- a) To prove that social healing, like musical resonance, arises from the individual holding the bowl.
- b) To show that the Tibetan singing bowl has a social soul.
- c) To indicate that its characteristics, when it contains sound, are analogous to those that provide harmony in social contexts.
- d) To stress the fact that a singing bowl teaches us about peace-building work as much as a painting or a drum or a string instrument does.

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	246
Difficulty Level	D
Avg. time spent on this question by students who got this question right	251
% of students who attempted this question	36.13
% of students who got the question right of those who attempted	61.87

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 447

Option A: Lederach observes that social healing, like musical resonance, emerges from the interaction of many vibrations, individual and collective, held within a community context. So social healing does not arise from the individual alone (... a container or space within which people [feel] safe but [are] also close enough to hear and receive the echo of each other's voices). Choice A is not the answer.

Option B: Choice B may be true but it is incomplete as an answer to the question.

Option C: Social healing and reconciliation emerge in and around the container that holds collective processes. ...The first distinguishing characteristic that the bowl shares with sound is circular movement. The second is the container itself: "the bowl creates the space or location from which the sound is coaxed and held, but in terms of movement the sensation is one of going deep, made possible by the circling". Deepening becomes a directional focus of the container. The third directional characteristic that makes the bowl a compelling metaphor is rising. Sound moves in all directions and offers the experience of "feelings of being touched and held". The third para also elaborates on the point mentioned in choice C. Circling, deepening, and rising are all aspects of the genuine, voluntary, non-imposed community reconciliation that Lederach prefers to discuss as "conflict transformation. Choice C is the correct answer.

Option D: Circling, deepening, and rising are all aspects of percussion that make instruments like drums and the singing bowl often function as "the heartbeat" of musical performances. But the comparison in choice D (peace-building work as much as a painting (*not mentioned*) or a drum or a string instrument does) is inapt. Choice D is not the specific answer to the question.

Choice (C)

undefined

DIRECTIONS for questions 16 to 18: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

John Paul Lederach advances our understanding of the role of art and music in peace-building. His work with fractured communities emphasizes the restoration of voice, a concept he finds particularly resonant with people who are struggling to repair their violent communities. What "voice" - understood both as the individual regaining his or her voice, and the community engaging in meaningful conversation - requires is "a container or space within which people [feel] safe but [are] also close enough to hear and receive the echo of each other's voices".

The particular metaphor Lederach favours in his representations of peace processes is one that brings together voice and container: the Tibetan singing bowl. He observes that social healing, like musical resonance, emerges from the interaction of many vibrations, individual and collective, held within a community context. Social healing and reconciliation emerge in and around the container that holds collective processes. ... The first distinguishing characteristic that the bowl shares with sound is circular movement: "[g]oing in circles and repeating them over and again is not," he insists, "... a movement of going nowhere," but has instead "a ritualistic quality ... creating a certain kind of space and moment". The second is the container itself: "the bowl creates the space or location from which the sound is coaxed and held, but in terms of movement the sensation is one of going deep, made possible by the circling". "Deepening becomes a directional focus of the container," says Lederach. The third directional characteristic that makes the bowl a compelling metaphor is rising: "[s]ound not only seems to rise from the bowl," he explains; "it expands, moves out, touches and surrounds the space within its reach. Sound moves in all directions and offers the experience of "feelings of being touched and held".

Circling, deepening, and rising are all aspects of percussion that make instruments like drums and the singing bowl often function as "the heartbeat" of musical performances. They are also important aspects of the genuine, voluntary, non-imposed community reconciliation that Lederach prefers to discuss as "conflict transformation." Going around, repeating

over and over, is a way of gathering grassroots support within a community; each time an outreach effort is made, space is created for community members who had previously not been involved to join the movement. The descending movement can be understood as a way of describing the process of developing, through a repetition that may well become ritualized, an emotional loyalty to something that starts out as a social commitment - internalizing the peace-building ambition. And the rising movement can similarly be understood as the inexorable pressure that a fully committed, mobilized grassroots community can exert on a wider population - regional, national, or international.

Q17. Which of the following can be said to be the underlying leitmotif of Lederach's peace building work?

- a) To depict social transformation as analogous to sonic phenomena.
- b) To strengthen the hypothesis that inanimate objects like a singing bowl are inevitably endowed with a voice.
- c) To metaphorically explain how social healing depends on internalizing the peace-building ambition.
- d) To explain how sonic phenomena can be applied to contexts of social change and healing.

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	95
Difficulty Level	D
Avg. time spent on this question by students who got this question right	105
% of students who attempted this question	26.41
% of students who got the question right of those who attempted	9.15

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 447

Option A: The particular metaphor Lederach favours in his representations of peace processes is one that brings together voice and container: the Tibetan singing bowl. He observes that social healing, like musical resonance, emerges from the interaction of many vibrations, individual and collective, held within a community context. The author goes on to elaborate on sonic phenomena in paras 2 and 3. Choice A is the answer.

Option B: His work with fractured communities emphasizes the restoration of voice, a concept he finds particularly resonant with people who are struggling to repair their violent communities. What "voice" – understood both as the individual regaining his or her voice, and the community engaging in meaningful conversation – requires is "a container or space within which people [feel] safe but [are] also close enough to hear and receive the echo of each other's voices". But choice B fails to explain the role of the community engaging in peace building efforts.

Option C: The descending movement can be understood as a way of describing the process of developing, through a repetition that may well become ritualized, an emotional loyalty to something that starts out as a social commitment – internalizing the peace-building ambition. But this is only a part of the entire social transformation process. So choice C is not the answer to the question.

Option D: The author is only using sonic phenomena as an analogy! He's not talking about applying sonic phenomena to social contexts!. Hence choice D is incorrect.

Choice (A)

undefined

DIRECTIONS for questions 16 to 18: The passage given below is accompanied by a set of three questions. Choose the best answer to each question.

John Paul Lederach advances our understanding of the role of art and music in peace-building. His work with fractured

communities emphasizes the restoration of voice, a concept he finds particularly resonant with people who are struggling to repair their violent communities. What “voice” - understood both as the individual regaining his or her voice, and the community engaging in meaningful conversation - requires is “a container or space within which people [feel] safe but [are] also close enough to hear and receive the echo of each other’s voices”.

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Q18. Consider the following:

A recurring, expanding, enveloping musical note arising from the Tibetan singing bowl flows out of the bowl and captivates the attention of those in the audience who may not have been paying complete attention.

Which of the following aspects of the Tibetan singing bowl, as discussed in the passage, can be said to be involved in the above situation?

- a) **Circling**
- b) **Deepening**
- c) **Rising**
- d) All of the above

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	79
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	75
% of students who attempted this question	35.06
% of students who got the question right of those who attempted	64.93

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 447

Option A: From the keyword 'recurring' in the question statement, we can infer that choice A applies. The first distinguishing characteristic that the bowl shares with sound is circular movement: "[g]oing in circles and repeating them over and again is not," he insists, "... a movement of going nowhere," but has instead "a ritualistic quality ... creating a certain kind of space and moment". *{This is analogous to the social context as well. Going around in circles, repeating over and over, is a way of gathering grassroots support within a community; each time an outreach effort is made, space is created for community members who had previously not been involved to join the movement.}* So choice A is the answer.

Option B: From the keywords 'expanding' and 'enveloping' in the question statement, we can infer that choice B applies. The second is the container itself: "the bowl creates the space or location from which the sound is coaxed and held, but in terms of movement the sensation is one of going deep, made possible by the circling". "Deepening becomes a directional focus of the container," says Lederach. *{This is analogous to the social context as well. The descending movement can be understood as a way of describing the process of developing, through a repetition that may well become ritualized, an emotional loyalty to something that starts out as a social commitment – internalizing the peace-building ambition.}* We can infer that choice B can be said to be an aspect on display in the given scenario.

Option C: From the keyword 'flows out' in the question statement, we can infer that choice C applies. The third directional characteristic that makes the bowl a compelling metaphor is rising: "[s]ound not only seems to rise from the bowl," he explains; "it expands, moves out, touches and surrounds the space within its reach. Sound moves in all directions and offers the experience of "feelings of being touched and held". *{This is analogous to the social context as well. And the rising movement can similarly be understood as the inexorable pressure (or influence) that a fully committed, mobilized grassroots community can exert on a wider population – regional, national, or international.}* So choice C definitely applies.

Choice (D)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

The 20th century was not a permanent plunge into depravity. The enduring moral trend of the century was a violence-averse humanism that originated in the Enlightenment, became overshadowed by counter-Enlightenment ideologies wedded to agents of growing destructive power and regained momentum in the wake of World War II. However, we are aware of the cliche "The twentieth century was the bloodiest in history" that has been used to indict a vast range of demons, including atheism, science, capitalism, communism etc. But is this true? The claim is rarely backed up by death tolls from any century other than the 20th. The 20th century also had more people. The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So, the death count of a war in 1600 would have to be multiplied by 4.5 for us to compare its destructiveness to the destructiveness of a war in the middle of the 20th century.

Another illusion is historical myopia: the closer an era is to our vantage point in the present, the more details of the same can be gathered. Historical myopia can afflict both common sense and professional history. The cognitive psychologists Amos Tversky and Daniel Kahneman have shown that people intuitively estimate relative frequency using a shortcut called the availability heuristic: the easier it is to recall examples of an event, the more probable people think it is. People overestimate the likelihoods of the kinds of accidents that make headlines, such as plane crashes, shark attacks, and terrorist bombings, and they underestimate those that pile up unremarked, like electrocutions, falls and drownings. In a survey of historical memory, I asked a hundred internet users to write down as many wars as they could remember in five minutes. The responses were heavily weighted towards the world wars, wars fought by the US, and wars close to the present. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries.

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Had you even heard of all of the great atrocities from time immemorial? I hadn't. Did you know there were five wars and four atrocities before World War I that killed more people than that war? I suspect many readers will also be surprised to learn that of the 21 worst things that people have ever done to each other, fourteen were in centuries before the 20th. And all of this pertains to absolute numbers. When you scale by population size, only one of the 20th century's atrocities even makes the top ten. The worst atrocity of all time was the Lushan Revolt and Civil War that began in 755 AD, an 8 year rebellion during China's Tang Dynasty that, according to censuses, resulted in the loss of two-thirds of the empire's population, a sixth of the world's population at the time.

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Q19. Which of the following can be reasons to suspect that “the 20th century being considered the bloodiest-century” notion is an illusion?

- a. The notion is rarely supported with relevant details about the hemoclysms of centuries past.
- b. The 20th century witnessed a higher population as compared to previous centuries.
- c. There is a tendency to overweight the conflicts that are most recent and most studied.

- a) a and c
- b) Only c
- c) a and b
- d) a, b and c

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	298
Difficulty Level	D
Avg. time spent on this question by students who got this question right	317
% of students who attempted this question	33.88
% of students who got the question right of those who attempted	58.47

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 773

"The twentieth century was the bloodiest in history" is a cliche that has been used to indict a vast range of demons, including atheism, science, capitalism, communism etc. Statement (a): The claim is rarely backed up by numbers from any century other than the 20th century. Hence (a) is true and is the answer. Hemoclysm means a violent and bloody conflict, a bloodbath.

Statement (b): The 20th century also had more people. The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So (b) is also true.

Statement (c): The responses were heavily weighted towards the world wars, wars fought by the US, and wars close to the present. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries. Hence (c) is also a reason for the question.

Choice (D)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

The 20th century was not a permanent plunge into depravity. The enduring moral trend of the century was a violence-averse humanism that originated in the Enlightenment, became overshadowed by counter-Enlightenment ideologies wedded to agents of growing destructive power and regained momentum in the wake of World War II. However, we are aware of the cliche "The twentieth century was the bloodiest in history" that has been used to indict a vast range of demons, including atheism, science, capitalism, communism etc. But is this true? The claim is rarely backed up by death tolls from any century other than the 20th. The 20th century also had more people. The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So, the death count of a war in 1600 would have to be multiplied by 4.5 for us to compare its destructiveness to the destructiveness of a war in the middle of the 20th century.

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When one corrects for the availability bias and the 20th century population explosion, one comes across many wars and massacres that could hold their head high among 20th-century atrocities. Taking into account population differences with past societies, Steven Pinker develops an "adjusted rank" with adjusted death tolls based on a "mid-20th- century equivalent" to come up with a new ranking for atrocities. The new ranking list includes not just deaths on the battlefield but indirect deaths of civilians from starvation and disease. The death toll is thus considerably higher than estimates of battlefield casualties for both recent and ancient events.

Had you even heard of all of the great atrocities from time immemorial? I hadn't. Did you know there were five wars and four atrocities before World War I that killed more people than that war? I suspect many readers will also be surprised to learn that of the 21 worst things that people have ever done to each other, fourteen were in centuries before the 20th. And all of this pertains to absolute numbers. When you scale by population size, only one of the 20th century's atrocities even makes the top ten. The worst atrocity of all time was the Lushan Revolt and Civil War that began in 755 AD, an 8 year rebellion during China's Tang Dynasty that, according to censuses, resulted in the loss of two-thirds of the empire's population, a sixth of the world's population at the time.

These figures, of course, cannot all be taken at face value. Some tendentiously blame the entire death toll of a famine or epidemic on a particular war, rebellion, or tyrant. And some came from innumerable cultures that lacked modern techniques for counting and record-keeping. At the same time, narrative history confirms that earlier civilizations were certainly capable of killing in vast numbers. Technological backwardness was no impediment; we know from Rwanda and Cambodia that massive numbers of people can be murdered with low-tech means like machetes and starvation. And in the distant past, implements of killing were not always so low-tech, because military weaponry usually boasted the most advanced

technology of the age. The military historian John Keegan notes that by the middle of the 2nd millennium BCE, the chariot allowed nomadic armies to rain death on the civilizations they invaded. "Circling at a distance of 100 or 200 yards from the herds of unarmoured foot soldiers, a chariot crew - one to drive, one to shoot - might have transfixed six men a minute."

Q20. Which method of correction for the availability bias and the twentieth century population explosion has been cited in the passage?

- a) Comparing the death tolls in the 20th century to those of previous centuries.
- b) Scaling the death tolls by the world population at that particular point of time and then comparing this figure across centuries.
- c) Rooting around in history books for particular wars and tyrannical rule that wiped out a large segment of the population.
- d) Ignoring the death toll data from those historical periods and cultures that lacked modern techniques for counting and record-keeping.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
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	99
% of students who attempted this question	30.5
% of students who got the question right of those who attempted	68.53

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 773

Option A: The claim is rarely backed up by death tolls from any century other than the 20th. But choice A (a mere comparison) is insufficient in correcting the availability bias mentioned in the passage.

Option B: The death count of a war in 1600 would have to be multiplied by 4.5 for us to compare its destructiveness to the destructiveness of a war in the middle of the 20th century. (para 1). When one corrects for the availability bias and the 20th century population explosion, one comes across many wars and massacres that could hold their head high among 20th-century atrocities. Taking into account population differences with past societies, Steven Pinker develops an "adjusted rank" with adjusted death tolls based on a "mid-20th- century equivalent" to come up with a new ranking for atrocities (para 3). When you scale by population size, only one of the 20th century's atrocities even makes the top ten (para 4). Choice B is the answer.

Option C: Some tendentiously blame the entire death toll of a famine or epidemic on a particular war, rebellion, or tyrant. But choice C is not specific to the question.

Option D: These figures, of course, cannot all be taken at face value. And some came from innumerable cultures that lacked modern techniques for counting and record-keeping. Choice D is not a sound method and does not answer the question.

Choice (B)

undefined

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humanism that originated in the Enlightenment, became overshadowed by counter-Enlightenment ideologies wedded to agents of growing destructive power and regained momentum in the wake of World War II. However, we are aware of the cliche "The twentieth century was the bloodiest in history" that has been used to indict a vast range of demons, including atheism, science, capitalism, communism etc. But is this true? The claim is rarely backed up by death tolls from any century other than the 20th. The 20th century also had more people. The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So, the death count of a war in 1600 would have to be multiplied by 4.5 for us to compare its destructiveness to the destructiveness of a war in the middle of the 20th century.

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Had you even heard of all of the great atrocities from time immemorial? I hadn't. Did you know there were five wars and four atrocities before World War I that killed more people than that war? I suspect many readers will also be surprised to learn that of the 21 worst things that people have ever done to each other, fourteen were in centuries before the 20th. And all of this pertains to absolute numbers. When you scale by population size, only one of the 20th century's atrocities even makes the top ten. The worst atrocity of all time was the Lushan Revolt and Civil War that began in 755 AD, an 8 year rebellion during China's Tang Dynasty that, according to censuses, resulted in the loss of two-thirds of the empire's population, a sixth of the world's population at the time.

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Q21. What can be understood from the author's statement "Had you even heard of all of the great atrocities from time immemorial? I hadn't." (para 4) in the context of the paragraph as a whole?

- a) A common man is aware of the many atrocities that the world has seen in the past.
- b) If the author can be unaware of many past atrocities, then the general public should be more ignorant of the same.
- c) Since the author had been unaware of many past atrocities, he could not have correctly assessed 20th century atrocities.
- d) In the case of atrocities and bloodbaths, there is a fixed pattern from the past to the present and to the future, and so the hemoclysms of the past can be compared to those of the present.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	2
Avg. time spent on this question by all students	99
Difficulty Level	D
Avg. time spent on this question by students who got this question right	99

Time spent / Accuracy Analysis

% of students who attempted this question	30.97
% of students who got the question right of those who attempted	35.04

[Video Solution](#)

Text Solution

Number of words and Explanatory notes for RC:

Number of words: 773

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Option A: When the author poses the given question, it is not to point out that a common man is aware of many hemoclysms of the past. Choice A cannot be inferred.

Option B: The relative superiority of the author vis a vis the general public is nowhere implied. Choice B is not the answer.

Option D: When the author asks "Had you even heard of all of the atrocities?", he does not talk about the ease of comparing the hemoclysms of the present with those of the past. Choice D is not the answer.

Choice (C)

undefined

undefined

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Q22. According to the passage, the world's most macabre atrocity of all time occurred

- a) during 755 AD - 763 AD.
- b) in the 2nd millennium BCE.
- c) in Rwanda and Cambodia.
- d) during the Second World War.

You did not answer this question

[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	55
Difficulty Level	M
Avg. time spent on this question by students who got this question right	54
% of students who attempted this question	35.71
% of students who got the question right of those who attempted	88.96

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 773

Option A: The worst atrocity of all time was the Lushan Revolt and Civil War that began in 755 AD, an 8 year rebellion during China's Tang Dynasty that, according to censuses, resulted in the loss of two-thirds of the empire's population, a sixth of the world's population at the time. Choice A is the correct answer.

Option B: The military historian John Keegan notes that by the middle of the 2nd millennium BCE, the chariot allowed nomadic armies to rain death on the civilizations they invaded ... ". But choice B is not the worst atrocity of all time.

Option C: Technological backwardness was no impediment; we know from Rwanda and Cambodia that massive numbers of people can be murdered with low-tech means like machetes and starvation. But choice C has not been mentioned as the most macabre atrocity of all time.

Option D: I asked a hundred internet users to write down as many wars as they could remember in five minutes. The responses were heavily weighted towards the world wars, wars fought by the US, and wars close to the present. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries. But choice D is not the answer.

Choice (A)

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You did not answer this question

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	55
Difficulty Level	M
Avg. time spent on this question by students who got this question right	54

Time spent / Accuracy Analysis

% of students who attempted this question	35.71
% of students who got the question right of those who attempted	88.96

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 773

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Option B: The military historian John Keegan notes that by the middle of the 2nd millennium BCE, the chariot allowed nomadic armies to rain death on the civilizations they invaded ... ". But choice B is not the worst atrocity of all time.

Option C: Technological backwardness was no impediment; we know from Rwanda and Cambodia that massive numbers of people can be murdered with low-tech means like machetes and starvation. But choice C has not been mentioned as the most macabre atrocity of all time.

Option D: I asked a hundred internet users to write down as many wars as they could remember in five minutes. The responses were heavily weighted towards the world wars, wars fought by the US, and wars close to the present. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries. But choice D is not the answer.
Choice (A)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

The 20th century was not a permanent plunge into depravity. The enduring moral trend of the century was a violence-averse humanism that originated in the Enlightenment, became overshadowed by counter-Enlightenment ideologies wedded to agents of growing destructive power and regained momentum in the wake of World War II. However, we are aware of the cliche "The twentieth century was the bloodiest in history" that has been used to indict a vast range of demons, including atheism, science, capitalism, communism etc. But is this true? The claim is rarely backed up by death tolls from any century other than the 20th. The 20th century also had more people. The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So, the death count of a war in 1600 would have to be multiplied by 4.5 for us to compare its destructiveness to the destructiveness of a war in the middle of the 20th century.

Another illusion is historical myopia: the closer an era is to our vantage point in the present, the more details of the same can be gathered. Historical myopia can afflict both common sense and professional history. The cognitive psychologists Amos Tversky and Daniel Kahneman have shown that people intuitively estimate relative frequency using a shortcut called the availability heuristic: the easier it is to recall examples of an event, the more probable people think it is. People overestimate the likelihoods of the kinds of accidents that make headlines, such as plane crashes, shark attacks, and terrorist bombings, and they underestimate those that pile up unremarked, like electrocutions, falls and drownings. In a survey of historical memory, I asked a hundred internet users to write down as many wars as they could remember in five minutes. The responses were heavily weighted towards the world wars, wars fought by the US, and wars close to the present. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries.

When one corrects for the availability bias and the 20th century population explosion, one comes across many wars and massacres that could hold their head high among 20th-century atrocities. Taking into account population differences with past societies, Steven Pinker develops an "adjusted rank" with adjusted death tolls based on a "mid-20th- century equivalent" to come up with a new ranking for atrocities. The new ranking list includes not just deaths on the battlefield but indirect deaths of civilians from starvation and disease. The death toll is thus considerably higher than estimates of battlefield casualties for both recent and ancient events.

Had you even heard of all of the great atrocities from time immemorial? I hadn't. Did you know there were five wars and four atrocities before World War I that killed more people than that war? I suspect many readers will also be surprised to learn

that of the 21 worst things that people have ever done to each other, fourteen were in centuries before the 20th. And all of this pertains to absolute numbers. When you scale by population size, only one of the 20th century's atrocities even makes the top ten. The worst atrocity of all time was the Lushan Revolt and Civil War that began in 755 AD, an 8 year rebellion during China's Tang Dynasty that, according to censuses, resulted in the loss of two-thirds of the empire's population, a sixth of the world's population at the time.

These figures, of course, cannot all be taken at face value. Some tendentiously blame the entire death toll of a famine or epidemic on a particular war, rebellion, or tyrant. And some came from innumerable cultures that lacked modern techniques for counting and record-keeping. At the same time, narrative history confirms that earlier civilizations were certainly capable of killing in vast numbers. Technological backwardness was no impediment; we know from Rwanda and Cambodia that massive numbers of people can be murdered with low-tech means like machetes and starvation. And in the distant past, implements of killing were not always so low-tech, because military weaponry usually boasted the most advanced technology of the age. The military historian John Keegan notes that by the middle of the 2nd millennium BCE, the chariot allowed nomadic armies to rain death on the civilizations they invaded. "Circling at a distance of 100 or 200 yards from the herds of unarmoured foot soldiers, a chariot crew - one to drive, one to shoot - might have transfixed six men a minute."

Q23. All of the following can be understood from the passage EXCEPT?

- a) The availability heuristic is a mental shortcut that relies on immediate examples that come to a given person's mind when evaluating a specific topic, concept, method or decision.
- b) A revolution around 1 CE that resulted in half a million deaths would be considered more bloody than a civil war in 1600 that claimed 500000 lives in a span of a few days.
- c) Low-tech implements of killing in the era prior to the 20th century and poor record-keeping of deaths have resulted in the notion that the twentieth century was the bloodiest in history.
- d) People think of the 20th century as the bloodiest because it has the most bloodshed that people can remember.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	3
Avg. time spent on this question by all students	99
Difficulty Level	D
Avg. time spent on this question by students who got this question right	114
% of students who attempted this question	25.12
% of students who got the question right of those who attempted	27.5

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 773

Option A: The cognitive psychologists Amos Tversky and Daniel Kahneman have shown that people intuitively estimate relative frequency using a shortcut called the availability heuristic: the easier it is to recall examples of an event, the more probable people think it is. So, choice A is correct and is not the answer.

Option B: The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So, though 500000 people were killed as given in choice B, in both the periods 1 CE and 1600, the bloodshed around 1 CE would be considered more atrocious or bloody than the event in 1600. Choice B is correct and is not the answer.

Option C: The first part of choice C is not true. At the same time, narrative history confirms that earlier civilizations were certainly capable of killing in vast numbers. Technological backwardness was no impediment; we know from Rwanda and Cambodia that massive numbers of people can be murdered with low-tech means like machetes and starvation. And in the distant past, implements of killing were not always so low-tech, because military weaponry usually boasted the most advanced technology of the age. Hence choice C is the answer.

Option D: The availability heuristic is: the easier it is to recall examples of an event, the more probable people think it is. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries. Choice D is true and is not the answer.

Choice (C)

undefined

DIRECTIONS for questions 19 to 24: The passage given below is accompanied by a set of six questions. Choose the best answer to each question.

The 20th century was not a permanent plunge into depravity. The enduring moral trend of the century was a violence-averse humanism that originated in the Enlightenment, became overshadowed by counter-Enlightenment ideologies wedded to agents of growing destructive power and regained momentum in the wake of World War II. However, we are aware of the cliche "The twentieth century was the bloodiest in history" that has been used to indict a vast range of demons, including atheism, science, capitalism, communism etc. But is this true? The claim is rarely backed up by death tolls from any century other than the 20th. The 20th century also had more people. The population of the world in 1950 was 2.5 billion, which is about two and a half times the population in 1800, four and a half times that in 1600, seven times that in 1300, and fifteen times that of 1 CE. So, the death count of a war in 1600 would have to be multiplied by 4.5 for us to compare its destructiveness to the destructiveness of a war in the middle of the 20th century.

Another illusion is historical myopia: the closer an era is to our vantage point in the present, the more details of the same can be gathered. Historical myopia can afflict both common sense and professional history. The cognitive psychologists Amos Tversky and Daniel Kahneman have shown that people intuitively estimate relative frequency using a shortcut called

the availability heuristic: the easier it is to recall examples of an event, the more probable people think it is. People overestimate the likelihoods of the kinds of accidents that make headlines, such as plane crashes, shark attacks, and terrorist bombings, and they underestimate those that pile up unremarked, like electrocutions, falls and drownings. In a survey of historical memory, I asked a hundred internet users to write down as many wars as they could remember in five minutes. The responses were heavily weighted towards the world wars, wars fought by the US, and wars close to the present. Though the earlier centuries, had far more wars, people remembered more wars from the recent centuries.

When one corrects for the availability bias and the 20th century population explosion, one comes across many wars and massacres that could hold their head high among 20th-century atrocities. Taking into account population differences with past societies, Steven Pinker develops an “adjusted rank” with adjusted death tolls based on a “mid-20th- century equivalent” to come up with a new ranking for atrocities. The new ranking list includes not just deaths on the battlefield but indirect deaths of civilians from starvation and disease. The death toll is thus considerably higher than estimates of battlefield casualties for both recent and ancient events.

Had you even heard of all of the great atrocities from time immemorial? I hadn't. Did you know there were five wars and four atrocities before World War I that killed more people than that war? I suspect many readers will also be surprised to learn that of the 21 worst things that people have ever done to each other, fourteen were in centuries before the 20th. And all of this pertains to absolute numbers. When you scale by population size, only one of the 20th century's atrocities even makes the top ten. The worst atrocity of all time was the Lushan Revolt and Civil War that began in 755 AD, an 8 year rebellion during China's Tang Dynasty that, according to censuses, resulted in the loss of two-thirds of the empire's population, a sixth of the world's population at the time.

These figures, of course, cannot all be taken at face value. Some tendentiously blame the entire death toll of a famine or epidemic on a particular war, rebellion, or tyrant. And some came from innumerable cultures that lacked modern techniques for counting and record-keeping. At the same time, narrative history confirms that earlier civilizations were certainly capable of killing in vast numbers. Technological backwardness was no impediment; we know from Rwanda and Cambodia that massive numbers of people can be murdered with low-tech means like machetes and starvation. And in the distant past, implements of killing were not always so low-tech, because military weaponry usually boasted the most advanced technology of the age. The military historian John Keegan notes that by the middle of the 2nd millennium BCE, the chariot allowed nomadic armies to rain death on the civilizations they invaded. “Circling at a distance of 100 or 200 yards from the herds of unarmoured foot soldiers, a chariot crew - one to drive, one to shoot - might have transfixed six men a minute.”

Q24. Match the words or idioms in Column A with their corresponding terms in column B.

<u>Column A</u>	<u>Column B</u>
1. depravity	a. prejudicially
2. hold the head high	b. bewitched
3. tendentiously	c. self-pride
4. transfix	d. can be considered comparable
5. indict	e. impaled
	f. nefariousness
	g. accuse

- a) 1 - f, 2 - d, 3 - c, 4 - b, 5 - g
- b) 1 - g, 2 - c, 3 - f, 4 - a, 5 - d
- c) 1 - a, 2 - c, 3 - b, 4 - f, 5 - e
- d) 1 - f, 2 - d, 3 - a, 4 - e, 5 - g **Your answer is correct**

Time spent / Accuracy Analysis

Time taken by you to answer this question	201
Avg. time spent on this question by all students	140
Difficulty Level	D
Avg. time spent on this question by students who got this question right	164
% of students who attempted this question	27.74
% of students who got the question right of those who attempted	30.96

[Video Solution](#)

[Text Solution](#)

Number of words and Explanatory notes for RC:

Number of words: 773

Depravity means moral corruption; wickedness; dissipation; nefariousness. So, 1 – f.
'hold the head high' is an idiom which means 'can be considered comparable'. Hence, 2 – d.

Tendentious refers to biased, one-sided, bigoted or prejudiced. So, 3 – a.
While Transfix is often used to mean 'bewitched', it also means impale or pierce with a sharp instrument, transpierce, puncture or perforate. In this context it is used to indicate how archers on chariots can wipe out their foes. Hence, 4 – e.

Indict means to charge with, make accusations about, arraign for. So, 5 – g.

Therefore, choice D provides the correctly matched pairs.

Choice (D)

undefined

Q25. DIRECTIONS for questions 25 to 28: The following question has five sentences. Each sentence is labeled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. The crystals have a strange atomic structure that repeats not just in space, but in time, putting them in perpetual motion without energy.
2. But now, for the first time, scientists have successfully created an entirely new form of matter called "time crystals."
3. Science classes everywhere teach about the three states of matter (solid, liquid and gas).
4. Quasimomentum, however, is conserved in a perfect crystal.
5. That may sound abstract, but excited researchers say the crystals could herald in a new era in physics and eventually revolutionize how we store and transfer information in quantum computing.

Your Answer:32154 □ Your answer is incorrect

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	137
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	127
% of students who attempted this question	58.8
% of students who got the question right of those who attempted	36.72

[Video Solution](#)

[Text Solution](#)

On a careful reading of the sentences, it can be observed that sentence 3 is a general sentence that begins the para. Sentence 3 is followed by sentence 2. "three states of matter (solid, liquid and gas)" in sentence 3 links with "created an entirely new form of matter called "time crystals.,"" in sentence 2. Sentence 2 is followed by sentence 1. Sentence 1 provides some details of "time crystals" i.e. atomic structure that repeats not just in space, but in time. Sentence 1 is followed by sentence 5. "That may sound abstract" in sentence 5 points to "strange atomic structure without energy" in sentence 1. So, 3215. Sentence 4 is the odd sentence out. 'Quasimomentum' needs to be explained. The use of 'however' in sentence 4 is not justified.

Ans: (4)

undefined

Q26. DIRECTIONS for questions 25 to 28: The following question has five sentences. Each sentence is labeled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. The team members dubbed the species *Synalpheus pinkfloydi*, inspired by their love of Pink Floyd.
2. On the Pacific coast of Panama, scientists discovered a new type of pistol shrimp that uses its large pink claw to create a noise so loud it can stun - or even kill - small fish.
3. The best thing about being a zoologist, aside from actually discovering new species, is getting to name them.
4. In fact, the sonic blast created by the animal's snapping claw can reach 210 decibels and it is one of the loudest sounds in the ocean, louder than a gun shot.
5. Loud music at rock concerts can expose individuals to sound pressure levels of 100-110 decibels (dBA) for several hours, a known cause of hearing loss.

Your Answer:3 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	71
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	95
% of students who attempted this question	55.69
% of students who got the question right of those who attempted	60.74

[Video Solution](#)

[Text Solution](#)

On a careful reading of the sentences, it can be observed that sentence 3 is a general sentence that begins the para. It introduces the topic of discussion of the para: A zoologist gets to name a newly discovered species. Sentence 3 is followed by sentence 2. "a zoologist, aside from actually discovering new species" in sentence 3 is followed by "scientists discovered a new type of pistol shrimp" in sentence 2. Sentence 2 introduces a new type of pistol shrimp. Sentence 2 is followed by sentence 4. "large pink claw to create a noise so loud it can stun – or even kill – small fish" in sentence 2 links with "the sonic blast created by the animal's snapping claw can reach 210 decibels" in sentence 4. The "in fact" in sentence 4 helps to emphasize the point in sentence 2. Sentence 4 is followed by sentence 1 which concludes the para. "The team members dubbed the species" in sentence 1 mirrors the introduction: getting to name the species. (The word 'love' in sentence 1 could indicate something more positive than mere volume, namely, Pink Floyd's standards of musicianship. In their time, the Pink Floyd rock band set standards that proved to be the undoing of many fledgling rock groups). So, 3241. Sentence 5 is the odd sentence out. It is not related to the remaining sentences which refer to the new shrimp. It can be a part of another para.

Ans: (5)

undefined

Q27. DIRECTIONS for questions 25 to 28: The following question has five sentences. Each sentence is labeled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. As in the original book, the reader is thus encouraged to view the plot not as something that evolves chronologically, but as an experience of fleeting, sometimes confused images.
2. Mr Heuet's illustrations are simple, yet dramatic, on the whole - and even a child could read this novel.
3. His seven-volume "In Search of Lost Time", published between 1913 and 1927, is known for its long, winding prose and its many ruminations on time and the slipperiness of memory.
4. Marcel Proust is a tough read.
5. For those who have never plucked up the courage to give it a go, Stephane Heuet's adaptation of the first volume into a graphic novel is welcome.

Your Answer:3 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	113
Avg. time spent on this question by all students	124
Difficulty Level	E
Avg. time spent on this question by students who got this question right	124
% of students who attempted this question	52
% of students who got the question right of those who attempted	24.14

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

On a careful reading of the sentences, it can be observed that sentence 4 is a general sentence that begins the para. It makes a claim that Marcel Proust's books are difficult to read. Sentence 4 is followed by sentence 3. "tough read" in sentence 4 is linked with "long, winding prose and its many ruminations on time and the slipperiness of memory" in sentence 3. Sentence 3 provides an example of Marcel Proust's novel that is a tough read. Sentence 3 is followed by sentence 5. "For those who have never plucked up the courage to give it a go" in sentence 5 reiterates "tough read" in sentence 4 and "long, winding prose" in sentence 3. "adaptation of the first volume into a graphic novel is welcome" in sentence 5 contrasts "tough read" in sentence 4 and "long, winding prose slipperiness of memory" in sentence 3. Sentence 5 is followed by sentence 2. "even a child could read this novel" in sentence 2 links with "Stephane Heuet's adaptation of the first volume into a graphic novel is welcome" in sentence 5. "simple, yet dramatic" in sentence 2 contrasts "tough read" in sentence 4. So, 4352. Sentence 1 is out of scope. It needs a precedent and more substantiation. "thus encouraged" in sentence 1 jumps the gun. "sometimes confused images" in sentence 1 paints the graphic novel in a negative light. Sentence 1 can be a part of another para much later in the thought flow.

Ans: (1)

undefined

Q28. DIRECTIONS for questions 25 to 28: The following question has five sentences. Each sentence is labeled with a number. All but one of the sentences can be rearranged to form a logically coherent paragraph. Key in the number of the sentence that does not fit contextually with the paragraph formed by the other four sentences.

1. Yet, thanks to a complex but hugely positive transition towards universal health care, they are increasingly capable of coping with it.
2. To that list must be added caring for victims of those insidious mosquitoes.
3. Yet in the past 24 months, Zika has spread to 23 countries in the Americas, infecting some 3 to 4 million people.
4. The disease, which probably causes babies of infected mothers to be born with small brains, will put primary health providers and hospitals in the region under strain.
5. Zika, a mosquito-borne virus, is the kind of epidemic that Latin America hoped it had put behind it.

Your Answer:1 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	139
Avg. time spent on this question by all students	121
Difficulty Level	M
Avg. time spent on this question by students who got this question right	113
% of students who attempted this question	54.31
% of students who got the question right of those who attempted	40.45

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

On a careful reading of the sentences, it can be observed that sentence 5 is a general sentence that begins the para. It introduces the Zika virus and mentions the main location that was affected by the Zika epidemic (Latin America). Sentence 5 is followed by sentence 3. "hoped it had put behind it" in sentence 5 contrasts "24 monthsZika spread to 23 American countries infecting some 3 to 4 million people" in sentence 3. Sentence 4 continues the discussion. Besides explaining how the Zika virus affects humans, sentence 4 mentions an important point: "put primary health providers and hospitals in the region under strain". "in the region" in sentence 4 points to "23 countries in the Americas" in sentence 3. Sentence 4 and sentence 1 form a mandatory pair. "put primary health providers and hospitals in the region under strain" in sentence 4 is contrasted by "Yet, thanks to a complex but hugely positive transition towards universal health care ... coping with it" in sentence 1. The pronoun "They" in sentence 1 points to "primary health providers and hospitals" in sentence 4. So, 5341. Sentence 2 is the odd sentence out. "To that list" in sentence 2 needs a precedent. "caring for victims of those insidious mosquitoes" is a course of action or a step to be taken to deal with the situation. Sentence 2 can come later in the thought flow.

Ans: (2)

undefined

Q29. DIRECTIONS for questions 29 to 32: 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 sentences and key in this sequence of five numbers as your answer, in the input box given below the question.

1. The term originally referred to a condition following acute brain damage (acquired prosopagnosia), but a congenital or developmental form of the disorder also exists, which may affect up to 2.5% of the United States population.
2. The functionality of the fusiform gyrus allows most people to recognize faces in more detail than they do similarly complex inanimate objects.
3. Prosopagnosia (face blindness), is a cognitive disorder of face perception in which the ability to recognize familiar faces, including one's own, is impaired, while other aspects of visual processing (e.g., object discrimination) and intellectual functioning (e.g., decision making) remain intact.
4. For those with prosopagnosia, the new method for recognizing faces depends on the less-sensitive object recognition system.
5. The specific brain area that is damaged in patients with prosopagnosia is the fusiform gyrus, which activates specifically in response to faces.

Your Answer:31524 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	167
Avg. time spent on this question by all students	172
Difficulty Level	D
Avg. time spent on this question by students who got this question right	175
% of students who attempted this question	42.18
% of students who got the question right of those who attempted	49.93

[Video Solution](#)

Text Solution

On a careful reading of the sentences, it can be observed that sentence 3 is a general sentence that begins the para. It introduces the topic of discussion: Prosopagnosia. It tells us that Prosopagnosia refers to the impairment in the ability to recognize faces. Sentence 3 is followed by sentence 1. It tells us that Prosopagnosia can result not only from acute brain damage, as originally thought, but also can arise congenitally. Sentence 1 is followed by sentence 5. Sentence 5 introduces the brain area "fusiform gyrus". "condition following acute brain damage (acquired prosopagnosia)" in sentence 1 links with "the fusiform gyrus is damaged in patients with prosopagnosia" in sentence 5. Sentence 5 is followed by sentence 2. "The fusiform gyrus, which activates specifically in response to faces" in sentence 5 links with "The functionality of the fusiform gyrus allows most people to recognize faces in more detail" in sentence 2. Sentence 2 explains the functionality of the fusiform gyrus in normal patients. Sentence 2 is followed by sentence 4. "recognize faces in more detail than they do similarly complex inanimate objects" in sentence 2 links with "new method for recognizing faces depends on the less-sensitive object recognition system". So, 31524.

Ans: (31524)

undefined

Q30. DIRECTIONS for questions 29 to 32: 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 sentences and key in this sequence of five numbers as your answer, in the input box given below the question.

1. The figures, relating to 2015, show that across Britain there were 11,819 deaths from prostate cancer, compared with 11,442 female deaths from breast cancer.
2. Breast cancer, it appears, is far more destructive: men typically die of prostate cancer at an older age than women die of breast cancer.
3. A better measure is "years of life lost", which compares the age at which someone dies from a disease to the age at which they would be expected to die.
4. Yet this is only half the story as a simple death count does not really get at the destructive impact of a disease.
5. It has been widely reported in the British press that the number of men dying from prostate cancer has overtaken female deaths from breast cancer for the first time.

Your Answer:15432 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	88
Avg. time spent on this question by all students	144
Difficulty Level	D
Avg. time spent on this question by students who got this question right	131
% of students who attempted this question	46.74
% of students who got the question right of those who attempted	23.65

[Video Solution](#)

[Text Solution](#)

On a careful reading of the sentences, it can be observed that sentence 5 is a general sentence that begins the para. It introduces the topic of discussion: the comparison of the number of men and women dying from two diseases. Sentence 5 is followed by sentence 1. Sentence 1 provides statistics for the claim made in sentence 5. "11,819 deaths from prostate cancer, compared with 11,442 female deaths from breast cancer" in sentence 1 strengthens "number of men dying from prostate cancer has overtaken female deaths from breast cancer" in sentence 5. Sentence 1 is followed by sentence 4. The contrast conjunction 'yet' in sentence 4 helps to bring in a corrected point of view: simple death count does not measure the destructive impact of a disease. Sentence 4 is followed by sentence 3. "A better measure is 'years of life lost'" in sentence 3 helps to substantiate the point made in sentence 4: simple death count does not really get at the destructive impact of a disease. Sentence 3 is followed by sentence 2. "Breast cancer, it appears, is far more destructive" in sentence 2 strengthens sentence 4 and counters the point about the number of deaths due to prostate cancer and breast cancer, in sentences 5 and 1. So, 51432.

Ans: (51432)

undefined

Q31. DIRECTIONS for questions 29 to 32: 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 sentences and key in this sequence of five numbers as your answer, in the input box given below the question.

1. Steel prices have risen by nearly 50% this year; steel production which fell in 2015 for the first time in decades is also up and smelters are set for a strong recovery after losing \$10 bn last year.
2. But in recent months, the fires from the country's blast-furnaces have started to emit the warm glow of profits.
3. And it is not just the steelmakers who will be pleased.
4. Besides being dirty and dangerous, making steel in China has been a good way to burn through money over the past few years.
5. Asia's central bankers can also take some comfort in the rising prices: they suggest that the threat of deflation might be receding.

Your Answer:42135 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	189
Avg. time spent on this question by all students	150
Difficulty Level	D
Avg. time spent on this question by students who got this question right	147
% of students who attempted this question	41.27
% of students who got the question right of those who attempted	30.26

[Video Solution](#)

[Text Solution](#)

On a careful reading of the sentences, it can be observed that sentence 4 is a general sentence that begins the para. It introduces the topic of discussion: steel manufacture in China. The idiom 'burn through money' in sentence 4 means "to spend or waste money quickly". Sentence 4 is followed by sentence 2 which has the contrast conjunction 'but'. "the country's blast-furnaces have started to emit the warm glow of profits" in sentence 2 contrasts "making steel in China has been a good way to burn through money over the past few years" in sentence 4. Sentence 1 follows sentence 2 which is positive in tone. "Steel prices have risen steel production is up smelters are set for a strong recovery" in sentence 1 links with "the country's blast-furnaces have started to emit the warm glow of profits" in sentence 2. So, 421. Sentence 1 is followed by sentence 3. "steelmakers are pleased" in sentence 3 points to the positive points given in sentence 1. Sentence 3 (not just the steelmakers who will be pleased, in recent months) contrasts sentence 4 (dirty and dangerous, making steel in China has been a good way to burn through money). Sentences 3 and 5 form a mandatory pair. "Asia's central bankers can also take some comfort in the rising prices" in sentence 5 links with "not just the steelmakers who will be pleased" in sentence 3. So, 42135.

Ans: (42135)

undefined

Q32. DIRECTIONS for questions 29 to 32: 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 sentences and key in this sequence of five numbers as your answer, in the input box given below the question.

1. If the consonant is "unvoiced" (like "f", "k" and "t"), then the -s is simply pronounced as an "s".
2. There are hidden rules not just in grammar, but at every level of language production.
3. The -s that marks a plural in English is pronounced differently depending on the previous consonants: if the consonant is "voiced" (i.e. the vocal chords vibrate, as in "v", "g" and "d"), then the -s is pronounced like a "z".
4. Every native English-speaker, including a child above the age of four, uses this rule every day but nobody is ever taught it, and almost nobody knows they know it.
5. Take pronunciation.

Your Answer:25314 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	109
Avg. time spent on this question by all students	113
Difficulty Level	D
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	42.31
% of students who got the question right of those who attempted	44.96

[Video Solution](#)

[Text Solution](#)

On a careful reading of the sentences, it can be observed that sentence 2 is a general sentence that begins the para. It introduces the topic of discussion: hidden rules in grammar and language production. Sentence 2 is followed by sentence 5. "every level of language production" in sentence 2 links with "take pronunciation" in sentence 5. Sentence 3 which provides an example follows sentence 5. "Take pronunciation" in sentence 5 is followed by "The -s that marks a plural in English is pronounced differently" in sentence 3. Sentences 3 and 1 form a mandatory pair. "if the consonant is "voiced"" in sentence 1 links with "If the consonant is "unvoiced"" in sentence 1. Also "the -s is pronounced like a "z"" in sentence 3 links "the -s is simply pronounced as an "s"" in sentence 1. Sentence 1 is followed by sentence 4. "uses this rule" in sentence 4 points to the example of the pronunciation rule given in sentences 3 and 1. Sentence 4 concludes the para. So, 25314.

Ans: (25314)

undefined

Q33. DIRECTIONS for questions 33 and 34: The following question has a paragraph from which the last sentence has been left incomplete. From the given options, choose the one that completes the paragraph in the most appropriate way.

Business cards have been around a long time in one form or another. The Chinese invented calling cards in the 1st century to give people notice that they intended to visit. European merchants invented trade cards in the 17th century to act as miniature advertisements. Today, lots of companies try to turn their cards into miniature plugs for their products. That business cards are thriving in a digital age is a forceful reminder that there is much about business that is timeless. Take, for instance, the eternal and inescapable question of whether you can trust someone. The number of things that machines can do better than humans grows by the day. But they cannot look people in the eye and decide what sort of person they are. And they cannot transform acquaintanceships into relationships. A good deal of business life will always be about social bonds - having dinner with people and playing sport with them.

- a) Cards can also act as a physical reminder that you have actually met someone rather than just Googled them.
- b) And the more that machines take over the quantitative stuff, the more human beings will have to focus on the touchy-feely.
- c) The rapid advance of both globalization and virtualization means that this trust-building process is becoming ever more demanding.
- d) Exchanging business cards is a way of sparking a conversation and a way of placing people correctly in the pecking order without the embarrassment of asking them their formal title.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	183
Avg. time spent on this question by all students	155
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	156
% of students who attempted this question	41.27
% of students who got the question right of those who attempted	26.19

[Video Solution](#)

[Text Solution](#)

The first half of the paragraph highlights the fact that business cards have been in use for a long time now. The second half of the paragraph makes a mention of the limitation of machines in general. Business cards are still doing well in a digital age. Machines may be better than humans. But in business, building trust and relationships count.

Option A: The paragraph has gone ahead from discussing business cards to talking about the importance of human social bonds that are required for a good business. Choice A disrupts the flow of thought and cannot complete the blank.

Option B: The number of things that machines can do better than humans grow by the day. And yet, machines cannot transform interactions or acquaintanceships into long term symbiotic relationships. Choice B aptly connects with the penultimate sentence and brings the para to a close. "human beings will have to focus on the touchy-feely" reiterates the importance of 'social bonds', 'looking people in the eye and deciding what sort of person they are' and 'transforming acquaintanceships into relationships'. Choice B is the correct answer.

Option C: Choice C would have been a suitable last sentence if it had 'necessary' instead of 'demanding'. As it is, it could be the start of another para. Choice C is not the answer.

Option D: Choice D sounds like a distraction. 'way of sparking a conversation' may seem to connect with the penultimate sentence but the last few sentences of the para focus on aspects of good 'business'. 'way of placing people correctly in the pecking order without the embarrassment of asking them their formal title (negative)' seems like an unnecessary addition to the para.

Choice (B)

undefined

Q34. DIRECTIONS for questions 33 and 34: The following question has a paragraph from which the last sentence has been left incomplete. From the given options, choose the one that completes the paragraph in the most appropriate way.

There is something comforting in a dictionary: right angles, a pleasing heft (weight), reassuringly rigid covers. A new one is compact, a bright sheaf of discoveries yet to be made; an old one is a musty but trusted cozy friend. A good dictionary is the classic school-leaving gift from ambitious parents to their children. A great dictionary might even be passed on through several generations. But maybe the most reassuring thing about a dictionary is its finite nature. A small dictionary contains all the words you need to know, and a really big one seems to contain all the words in existence.

- a) Erin McKean, who left traditional lexicography to found an online dictionary, Wordnik, explained why she chose a format that could allow virtually limitless entries: "I don't want to be a traffic cop!"
- b) Lexicographers, aware that people still look to them for guidance on what is a "real" word and what isn't, whether or not they like this role, can still be conservative.
- c) Having one nearby seems to say that the language has boundaries, and reasonable ones at that.
- d) But the principle is to catch all of the language in use, and not merely to admit the good words, whatever those are. □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	153
Avg. time spent on this question by all students	203
Difficulty Level	M
Avg. time spent on this question by students who got this question right	193
% of students who attempted this question	34.62
% of students who got the question right of those who attempted	37.78

[Video Solution](#)

[Text Solution](#)

The entire paragraph talks about a dictionary. It mentions what a good dictionary is and what a great dictionary is. The tone of the para is positive overall (comforting, reassuring, trusted and cozy friend).

Option A: Choice A neither connects with the penultimate sentence of the para nor does it complete the thought flow. Choice A which focuses on 'format' of dictionary is slightly out of scope. Though choice A brings in another type of dictionary (the online dictionary), which seems to link with 'small dictionary' and 'really big dictionary', choice A can be a part of another para, much later in the flow.

Option B: Choice B jumps the gun as there is no discussion of "real word" and otherwise. Also, choice B changes the track of the discussion from 'dictionary' to 'lexicography'. Choice B cannot complete the last sentence.

Option C: Refer to the last few lines of the paragraph. It refers to the finite nature of a dictionary. So "all the words you need to know" and "all the words in existence" {as given in the penultimate sentence of the para} links with the view in choice C viz. the language has boundaries, and reasonable ones at that. The pronoun 'one' in choice C refers to a dictionary. Hence choice C best completes the last sentence of the paragraph.

Option D: Choice D hints at the process of adding words to a dictionary. "catch all of the language in use, and not merely to admit the good words, whatever those are" as given in choice D runs contrary to "finite nature of a dictionary". Also choice D cannot end the paragraph as the use of 'but', which is a contrast conjunction, is unwarranted.

Choice (C)

undefined

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

Hari wanted to get a new phone number, which comprises eight non-zero digits. He chose a phone number which satisfied all the following conditions, with the digits being referred to as first to eighth, starting from the leftmost digit:

- i. The last digit was greater than the third digit, while the fourth digit and the fifth digit, taken in that order, comprised (i.e., formed) a prime number.
- ii. The sixth and the third digits, taken in that order, comprised an even number greater than 40, while the first and the second digits are not the same.
- iii. The sum of the fourth digit and the third digit was the same as the fifth digit.
- iv. The sum of the fifth and the sixth digits was exactly 9, while the sixth and the seventh digits, taken in that order, comprised a prime number.
- v. The second and the eighth digits, taken in that order, comprised a number which was four more than the number comprised by the first and the second digits, taken in that order.

Q1. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

In how many ways could Hari have chosen his phone number?

- a) 1 Your answer is incorrect
 b) 2

c) 4

d) 8

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	1283
Avg. time spent on this question by all students	621
Difficulty Level	M
Avg. time spent on this question by students who got this question right	695
% of students who attempted this question	19.92
% of students who got the question right of those who attempted	39.54

Video Solution

Text Solution

From (i), the fourth and fifth digits form a prime number. Hence, the fifth digit cannot be 2 or 4 or 5 or 6 or 8. Hence, the fifth digit can only be 1 or 3 or 7 or 9.

From (ii), the sixth digit must be at least 4. The third digit must be 2 or 4 or 6 or 8.

From (iv), the fifth digit cannot be 9 (because the sum of the fifth and sixth digits cannot be 9 in this case). Also, since the sixth digit is at least 4, the fifth digit can be at most 5. Hence, the fifth digit can only be 1 or 3 (from (i)).

From (iii), the sum of the fourth and third digit was the same as the fifth digit. Since the third and fourth digit must be at least 1 each, the fifth digit cannot be 1.

Hence, the fifth digit must be 3. From (iii), the sum of the third and fourth digit must be 3. Since the third digit cannot be 1 (from (ii)), the fourth digit must be 1 and the third digit must be 2.

Since the fifth digit is 3, from (iv), the sixth digit must be 6.

From (iv), the sixth and seventh digits form a prime number. Since the sixth digit is 6, the seventh digit can only be 1 or 7.

From (i), the last digit cannot be 1 or 2.

From (v), the second and eighth digit taken in that order was four more than the first and second digit taken in that order. Let a, b and c represent the first, second and eighth digits in that order. From (ii) and (v), $ab + 4$ must be of the form bc.

Since adding 4 to b must make it greater than 10 (only if this happens the tens digit will change). Hence, b must be at least 6.

However, if b is 6, the last digit, c, must be 0, which is not possible.

If b is 7, c must be 1, which is not possible (from (i)).

If b is 8, c must be 2, which is also not possible (from (i)).

If b is 9, c must be 3. This is the only possibility.

Also, for condition (v) to be satisfied, a must be 1 less than b. Hence, the first digit must be 8.

The following table provides the possibilities for the 8 digits:

Position	1	2	3	4	5	6	7	8
Digit	8	9	2	1	3	6	1/7	3

Hari could have chosen his phone number in two ways.

Choice (B)

undefined

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

Hari wanted to get a new phone number, which comprises eight non-zero digits. He chose a phone number which satisfied all the following conditions, with the digits being referred to as first to eighth, starting from the leftmost digit:

i.

The last digit was greater than the third digit, while the fourth digit and the fifth digit, taken in that order, comprised (i.e., formed) a prime number.

- ii. The sixth and the third digits, taken in that order, comprised an even number greater than 40, while the first and the second digits are not the same.
- iii. The sum of the fourth digit and the third digit was the same as the fifth digit.
- iv. The sum of the fifth and the sixth digits was exactly 9, while the sixth and the seventh digits, taken in that order, comprised a prime number.
- v. The second and the eighth digits, taken in that order, comprised a number which was four more than the number comprised by the first and the second digits, taken in that order.

Q2. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

Which of the following is the eighth digit of the phone number?

- a) 4
- b) 5
- c) 3 Your answer is correct
- d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	121
Avg. time spent on this question by all students	112
Difficulty Level	M
Avg. time spent on this question by students who got this question right	121
% of students who attempted this question	22.46
% of students who got the question right of those who attempted	33.68

[Video Solution](#)

[Text Solution](#)

From (i), the fourth and fifth digits form a prime number. Hence, the fifth digit cannot be 2 or 4 or 5 or 6 or 8. Hence, the fifth digit can only be 1 or 3 or 7 or 9.

From (ii), the sixth digit must be at least 4. The third digit must be 2 or 4 or 6 or 8.

From (iv), the fifth digit cannot be 9 (because the sum of the fifth and sixth digits cannot be 9 in this case). Also, since the sixth digit is at least 4, the fifth digit can be at most 5. Hence, the fifth digit can only be 1 or 3 (from (i)).

From (iii), the sum of the fourth and third digit was the same as the fifth digit. Since the third and fourth digit must be at least 1 each, the fifth digit cannot be 1.

Hence, the fifth digit must be 3. From (iii), the sum of the third and fourth digit must be 3. Since the third digit cannot be 1 (from (ii)), the fourth digit must be 1 and the third digit must be 2.

Since the fifth digit is 3, from (iv), the sixth digit must be 6.

From (iv), the sixth and seventh digits form a prime number. Since the sixth digit is 6, the seventh digit can only be 1 or 7.

From (i), the last digit cannot be 1 or 2.

From (v), the second and eighth digit taken in that order was four more than the first and second digit taken in that order. Let a, b and c represent the first, second and eighth digits in that order. From (ii) and (v), $ab + 4$ must be of the form bc.

Since adding 4 to b must make it greater than 10 (only if this happens the tens digit will change). Hence, b must be at least 6.

However, if b is 6, the last digit, c, must be 0, which is not possible.

If b is 7, c must be 1, which is not possible (from (i)).

If b is 8, c must be 2, which is also not possible (from (i)).

If b is 9, c must be 3. This is the only possibility.

Also, for condition (v) to be satisfied, a must be 1 less than b. Hence, the first digit must be 8.

The following table provides the possibilities for the 8 digits:

Position	1	2	3	4	5	6	7	8
Digit	8	9	2	1	3	6	1/7	3

The eighth digit of the phone number of 3.

Choice (C)

undefined

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

Hari wanted to get a new phone number, which comprises eight non-zero digits. He chose a phone number which satisfied all the following conditions, with the digits being referred to as first to eighth, starting from the leftmost digit:

- i. The last digit was greater than the third digit, while the fourth digit and the fifth digit, taken in that order, comprised (i.e., formed) a prime number.
- ii. The sixth and the third digits, taken in that order, comprised an even number greater than 40, while the first and the second digits are not the same.
- iii. The sum of the fourth digit and the third digit was the same as the fifth digit.
- iv. The sum of the fifth and the sixth digits was exactly 9, while the sixth and the seventh digits, taken in that order, comprised a prime number.
- v. The second and the eighth digits, taken in that order, comprised a number which was four more than the number comprised by the first and the second digits, taken in that order.

Q3. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

Which of the following is the number comprised by the fifth and the second digits of the phone number, taken in that order?

- a) 72
- b) 32
- c) 39 Your answer is correct
- d) 77

Time spent / Accuracy Analysis

Time taken by you to answer this question	179
Avg. time spent on this question by all students	124
Difficulty Level	M
Avg. time spent on this question by students who got this question right	128
% of students who attempted this question	19.96
% of students who got the question right of those who attempted	48.26

[Video Solution](#)

[Text Solution](#)

From (i), the fourth and fifth digits form a prime number. Hence, the fifth digit cannot be 2 or 4 or 5 or 6 or 8. Hence, the fifth digit can only be 1 or 3 or 7 or 9.

From (ii), the sixth digit must be at least 4. The third digit must be 2 or 4 or 6 or 8.

From (iv), the fifth digit cannot be 9 (because the sum of the fifth and sixth digits cannot be 9 in this case). Also, since the sixth digit is at least 4, the fifth digit can be at most 5. Hence, the fifth digit can only be 1 or 3 (from (i)).

From (iii), the sum of the fourth and third digit was the same as the fifth digit. Since the third and fourth digit must be at least 1 each, the fifth digit cannot be 1.

Hence, the fifth digit must be 3. From (iii), the sum of the third and fourth digit must be 3. Since the third digit cannot be 1 (from (ii)), the fourth digit must be 1 and the third digit must be 2.

Since the fifth digit is 3, from (iv), the sixth digit must be 6.

From (iv), the sixth and seventh digits form a prime number. Since the sixth digit is 6, the seventh digit can only be 1 or 7.

From (i), the last digit cannot be 1 or 2.

From (v), the second and eighth digit taken in that order was four more than the first and second digit taken in that order. Let a, b and c represent the first, second and eighth digits in that order. From (ii) and (v), $ab + 4$ must be of the form bc.

Since adding 4 to b must make it greater than 10 (only if this happens the tens digit will change). Hence, b must be at least 6.

However, if b is 6, the last digit, c, must be 0, which is not possible.

If b is 7, c must be 1, which is not possible (from (i)).

If b is 8, c must be 2, which is also not possible (from (i)).

If b is 9, c must be 3. This is the only possibility.

Also, for condition (v) to be satisfied, a must be 1 less than b. Hence, the first digit must be 8.

The following table provides the possibilities for the 8 digits:

Position	1	2	3	4	5	6	7	8
Digit	8	9	2	1	3	6	1/7	3

The fifth and second digits of the phone number taken in that order form the number 39.

Choice (C)

undefined

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

Hari wanted to get a new phone number, which comprises eight non-zero digits. He chose a phone number which satisfied all the following conditions, with the digits being referred to as first to eighth, starting from the leftmost digit:

i.

The last digit was greater than the third digit, while the fourth digit and the fifth digit, taken in that order, comprised (i.e., formed) a prime number.

- ii. The sixth and the third digits, taken in that order, comprised an even number greater than 40, while the first and the second digits are not the same.
- iii. The sum of the fourth digit and the third digit was the same as the fifth digit.
- iv. The sum of the fifth and the sixth digits was exactly 9, while the sixth and the seventh digits, taken in that order, comprised a prime number.
- v. The second and the eighth digits, taken in that order, comprised a number which was four more than the number comprised by the first and the second digits, taken in that order.

Q4. DIRECTIONS for questions 1 to 4: Select the correct alternative from the given choices.

What is the difference between the first and the last digits of the phone number?

- a) 5 Your answer is correct
- b) 6
- c) 8
- d) 3

Time spent / Accuracy Analysis

Time taken by you to answer this question	104
Avg. time spent on this question by all students	60
Difficulty Level	M
Avg. time spent on this question by students who got this question right	57
% of students who attempted this question	15.31
% of students who got the question right of those who attempted	59.42

[Video Solution](#)

[Text Solution](#)

From (i), the fourth and fifth digits form a prime number. Hence, the fifth digit cannot be 2 or 4 or 5 or 6 or 8. Hence, the fifth digit can only be 1 or 3 or 7 or 9.

From (ii), the sixth digit must be at least 4. The third digit must be 2 or 4 or 6 or 8.

From (iv), the fifth digit cannot be 9 (because the sum of the fifth and sixth digits cannot be 9 in this case). Also, since the sixth digit is at least 4, the fifth digit can be at most 5. Hence, the fifth digit can only be 1 or 3 (from (i)).

From (iii), the sum of the fourth and third digit was the same as the fifth digit. Since the third and fourth digit must be at least 1 each, the fifth digit cannot be 1.

Hence, the fifth digit must be 3. From (iii), the sum of the third and fourth digit must be 3. Since the third digit cannot be 1 (from (ii)), the fourth digit must be 1 and the third digit must be 2.

Since the fifth digit is 3, from (iv), the sixth digit must be 6.

From (iv), the sixth and seventh digits form a prime number. Since the sixth digit is 6, the seventh digit can only be 1 or 7.

From (i), the last digit cannot be 1 or 2.

From (v), the second and eighth digit taken in that order was four more than the first and second digit taken in that order. Let a, b and c represent the first, second and eighth digits in that order. From (ii) and (v), $ab + 4$ must be of the form bc.

Since adding 4 to b must make it greater than 10 (only if this happens the tens digit will change). Hence, b must be at least 6.

However, if b is 6, the last digit, c, must be 0, which is not possible.

If b is 7, c must be 1, which is not possible (from (i)).

If b is 8, c must be 2, which is also not possible (from (i)).

If b is 9, c must be 3. This is the only possibility.

Also, for condition (v) to be satisfied, a must be 1 less than b. Hence, the first digit must be 8.

The following table provides the possibilities for the 8 digits:

Position	1	2	3	4	5	6	7	8
Digit	8	9	2	1	3	6	1/7	3

The difference between the first and last digits of the phone number = 5.

Choice (A)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

Three panel members, X, Y and Z, interviewed four candidates - A, B, C and D. Each panel member scored each of the four candidates on four parameters - P1, P2, P3 and P4. The following tables provides partial information about the score given by each panel member to each candidate in each parameter:

Panel Member: X				
	P1	P2	P3	P4
A	1			
B				
C				
D	4			

Panel Member: Y				
	P1	P2	P3	P4
A		7		
B			5	
C				
D		8		

Panel Member: Z				
	P1	P2	P3	P4
A				4
B				
C				
D				5

The following information is known about the scores given by each panel member:

- i. In each parameter, X gave a different score to each candidate and, for each candidate, X gave a different score in each parameter.
- ii. In each parameter, Y gave a different score to each candidate and, for each candidate, Y gave a different score in each parameter.
- iii. The scores that X gave to any candidate in any parameter was a positive integer less than 5.
- iv. The scores that Y gave to any candidate in any parameter was an integer less than 9 and greater than 4.
- v. The score given by Z to any candidate in any parameter was the average of the scores given by X and Y to that candidate in that parameter.
- vi. The score given by Z to any candidate in any parameter was an integer.

Q5. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

What is the score given by X to C in P2?

- a) 1
- b) 2
- c) 3
- d) 4

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	87
Avg. time spent on this question by all students	554
Difficulty Level	D
Avg. time spent on this question by students who got this question right	645
% of students who attempted this question	29.12
% of students who got the question right of those who attempted	62.03

[Video Solution](#)

[Text Solution](#)

Given that both X and Y did not give the same score for any two parameters or for any two students (from (i) and (ii)).

Also, the score that Z gave was the average of the scores that X and Y gave.
X could have given a score of 1 or 2 or 3 or 4 for any candidate in any parameter (from (iii)).

Y could have given a score of 5 or 6 or 7 or 8 for any candidate in any parameter (from (iv)).

Since Z gave an integer score, if X gives an odd score, Y must also give an odd score and vice versa. If X gives an even score, Y must also give an even score and vice versa. Only then will the score that Z gave be an integer.

For candidate A, X gave score of 1 in P1. Y must have given a score of 5 or 7 in P1 for A. Since Y gave 7 for A in P2, Y must have given 5 for A in P1.

Y gave a score of 7 for A in P2. X must have given a score of 1 or 3 in P2 for A. Since X gave a score of 1 for A in P1, X must have given a score of 3 for A in P2.

Z gave a score of 4 for A in P4. Hence, the sum of the scores given by X and Y in P4 for A must be 8. This is possible if they gave (1, 7) or (2, 6) or (3, 5). But for A, X gave a score of 1 in P1 and 3 in P2. Hence, X must have given a score of 2 in P4 for A and Y must have given a score of 6 in P4 for A.

For A in P3, X must have given 4 and Y must have given 8.

For D, X gave a score of 4 in P1. Y can give a score of 6 or 8 for D in P1. But Y gave a score of 8 for D in P2. Hence, Y must have given a score of 6 for D in P1.

Since Y gave a score of 8 for D in P2, X must have given a score of 2 for D in P2.

The score given by Y to D in P4 cannot be 6 or 8 (since Y gave those scores to D in P1 and P2 respectively); it cannot be 5 because Y gave a score of 5 to B in P4. Hence, Y must have given a score of 7 for D in P4.

And Y must have given a score of 5 for D in P3.

Since Z gave a score of 5 for D in P4 and Y gave a score of 7 for D in P4, X must have given a score of 3 for D in P4. X must have given a score of 1 for D in P3.

In P4, Y must have given a score of 8 to C (since he gave 5, 6 and 7 to B, A and D in P4). X has to give either 2 or 4 for C in P4. But X has given a score of 2 to A in P4. Hence, X must give a score of 4 to C in P4. X must give a score of 1 to B in P4.

In P1, Y must have given a score of 7 to C (Y gave 5 and 6 to A and D in P1; Y gave 8 to C in P4). Y must have given a score of 8 to B in P1. Y must have given a score of 6 and 7 for B in P2 and P3 respectively. Y must have given a score of 5 and 6 for C in P2 and P3 respectively.

Since Y gave a score of 6 for C in P3, X must have given 2 or 4 in the same parameter. However, X gave 4 for C in P4. Hence, X must have given 2 for C in P3. X must have given 3 for B in P3.

Also, X must have given 2 and 4 for B in P1 and P2 respectively. X must have given 3 and 1 for C in P1 and P2 respectively.

We can calculate the scores given by Z for all the candidates for all the parameters.

The scores given by each of the three members is given below.

Panel Member: X				
	P1	P2	P3	P4
A	1	3	4	2
B	2	4	3	1
C	3	1	2	4
D	4	2	1	3

Panel Member: Y				
	P1	P2	P3	P4
A	5	7	8	6
B	8	6	7	5
C	7	5	6	8
D	6	8	5	7

Panel Member: Z				
	P1	P2	P3	P4
A	3	5	6	4
B	5	5	5	3
C	5	3	4	6
D	5	5	3	5

X gave a score of 1 to C in P2.

Choice (A)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

Three panel members, X, Y and Z, interviewed four candidates - A, B, C and D. Each panel member scored each of the four candidates on four parameters - P1, P2, P3 and P4. The following tables provides partial information about the score given by each panel member to each candidate in each parameter:

Panel Member: X				
	P1	P2	P3	P4
A	1			
B				
C				
D	4			

Panel Member: Y				
	P1	P2	P3	P4
A		7		
B			5	
C				
D		8		

Panel Member: Z				
	P1	P2	P3	P4
A				4
B				
C				
D				5

The following information is known about the scores given by each panel member:

- i. In each parameter, X gave a different score to each candidate and, for each candidate, X gave a different score in each parameter.
- ii. In each parameter, Y gave a different score to each candidate and, for each candidate, Y gave a different score in each parameter.
- iii. The scores that X gave to any candidate in any parameter was a positive integer less than 5.
- iv. The scores that Y gave to any candidate in any parameter was an integer less than 9 and greater than 4.
- v. The score given by Z to any candidate in any parameter was the average of the scores given by X and Y to that candidate in that parameter.
- vi. The score given by Z to any candidate in any parameter was an integer.

Q6. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

What is the score given by Z to B in P1?

- a) 3
- b) 4
- c) 5
- d) 6

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	108
Difficulty Level	D
Avg. time spent on this question by students who got this question right	107
% of students who attempted this question	26.75
% of students who got the question right of those who attempted	78.39

[Video Solution](#)

[Text Solution](#)

Given that both X and Y did not give the same score for any two parameters or for any two students (from (i) and (ii)).

Also, the score that Z gave was the average of the scores that X and Y gave.
X could have given a score of 1 or 2 or 3 or 4 for any candidate in any parameter (from (iii)).

Y could have given a score of 5 or 6 or 7 or 8 for any candidate in any parameter (from (iv)).

Since Z gave an integer score, if X gives an odd score, Y must also give an odd score and vice versa. If X gives an even score, Y must also give an even score and vice versa. Only then will the score that Z gave be an integer.

For candidate A, X gave score of 1 in P1. Y must have given a score of 5 or 7 in P1 for A. Since Y gave 7 for A in P2, Y must have given 5 for A in P1.

Y gave a score of 7 for A in P2. X must have given a score of 1 or 3 in P2 for A. Since X gave a score of 1 for A in P1, X must have given a score of 3 for A in P2.

Z gave a score of 4 for A in P4. Hence, the sum of the scores given by X and Y in P4 for A must be 8. This is possible if they gave (1, 7) or (2, 6) or (3, 5). But for A, X gave a score of 1 in P1 and 3 in P2. Hence, X must have given a score of 2 in P4 for A and Y must have given a score of 6 in P4 for A.

For A in P3, X must have given 4 and Y must have given 8.

For D, X gave a score of 4 in P1. Y can give a score of 6 or 8 for D in P1. But Y gave a score of 8 for D in P2. Hence, Y must have given a score of 6 for D in P1.

Since Y gave a score of 8 for D in P2, X must have given a score of 2 for D in P2.

The score given by Y to D in P4 cannot be 6 or 8 (since Y gave those scores to D in P1 and P2 respectively); it cannot be 5 because Y gave a score of 5 to B in P4. Hence, Y must have given a score of 7 for D in P4.

And Y must have given a score of 5 for D in P3.

Since Z gave a score of 5 for D in P4 and Y gave a score of 7 for D in P4, X must have given a score of 3 for D in P4. X must have given a score of 1 for D in P3.

In P4, Y must have given a score of 8 to C (since he gave 5, 6 and 7 to B, A and D in P4). X has to give either 2 or 4 for C in P4. But X has given a score of 2 to A in P4. Hence, X must give a score of 4 to C in P4. X must give a score of 1 to B in P4.

In P1, Y must have given a score of 7 to C (Y gave 5 and 6 to A and D in P1; Y gave 8 to C in P4). Y must have given a score of 8 to B in P1. Y must have given a score of 6 and 7 for B in P2 and P3 respectively. Y must have given a score of 5 and 6 for C in P2 and P3 respectively.

Since Y gave a score of 6 for C in P3, X must have given 2 or 4 in the same parameter. However, X gave 4 for C in P4. Hence, X must have given 2 for C in P3. X must have given 3 for B in P3.

Also, X must have given 2 and 4 for B in P1 and P2 respectively. X must have given 3 and 1 for C in P1 and P2 respectively.

We can calculate the scores given by Z for all the candidates for all the parameters.

The scores given by each of the three members is given below.

Panel Member: X				
	P1	P2	P3	P4
A	1	3	4	2
B	2	4	3	1
C	3	1	2	4
D	4	2	1	3

Panel Member: Y				
	P1	P2	P3	P4
A	5	7	8	6
B	8	6	7	5
C	7	5	6	8
D	6	8	5	7

Panel Member: Z				
	P1	P2	P3	P4
A	3	5	6	4
B	5	5	5	3
C	5	3	4	6
D	5	5	3	5

Z gave a score of 5 to B in P1.

Choice (C)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

Three panel members, X, Y and Z, interviewed four candidates - A, B, C and D. Each panel member scored each of the four candidates on four parameters - P1, P2, P3 and P4. The following tables provides partial information about the score given by each panel member to each candidate in each parameter:

Panel Member: X				
	P1	P2	P3	P4
A	1			
B				
C				
D	4			

Panel Member: Y				
	P1	P2	P3	P4
A		7		
B			5	
C				
D		8		

Panel Member: Z				
	P1	P2	P3	P4
A				4
B				
C				
D				5

The following information is known about the scores given by each panel member:

- i. In each parameter, X gave a different score to each candidate and, for each candidate, X gave a different score in each parameter.
- ii. In each parameter, Y gave a different score to each candidate and, for each candidate, Y gave a different score in each parameter.
- iii. The scores that X gave to any candidate in any parameter was a positive integer less than 5.
- iv. The scores that Y gave to any candidate in any parameter was an integer less than 9 and greater than 4.
- v. The score given by Z to any candidate in any parameter was the average of the scores given by X and Y to that candidate in that parameter.
- vi. The score given by Z to any candidate in any parameter was an integer.

Q7. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

For each candidate, the scores that he received in each parameter from the three panel members were added to create a **Composite Score** for that parameter.

Which candidate received the highest **Composite Score** in P3?

- a) **B**
- b) **D**
- c) **A**
- d) **C**

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	108
Difficulty Level	D
Avg. time spent on this question by students who got this question right	110
% of students who attempted this question	21.92
% of students who got the question right of those who attempted	74.59

[Video Solution](#)

[Text Solution](#)

Given that both X and Y did not give the same score for any two parameters or for any two students (from (i) and (ii)).

Also, the score that Z gave was the average of the scores that X and Y gave.

X could have given a score of 1 or 2 or 3 or 4 for any candidate in any parameter (from (iii)).

Y could have given a score of 5 or 6 or 7 or 8 for any candidate in any parameter (from (iv)).

Since Z gave an integer score, if X gives an odd score, Y must also give an odd score and vice versa. If X gives an even score, Y must also give an even score and vice versa. Only then will the score that Z gave be an integer.

For candidate A, X gave score of 1 in P1. Y must have given a score of 5 or 7 in P1 for A. Since Y gave 7 for A in P2, Y must have given 5 for A in P1.

Y gave a score of 7 for A in P2. X must have given a score of 1 or 3 in P2 for A. Since X gave a score of 1 for A in P1, X must have given a score of 3 for A in P2.

Z gave a score of 4 for A in P4. Hence, the sum of the scores given by X and Y in P4 for A must be 8. This is possible if they gave (1, 7) or (2, 6) or (3, 5). But for A, X gave a score of 1 in P1 and 3 in P2. Hence, X must have given a score of 2 in P4 for A and Y must have given a score of 6 in P4 for A.

For A in P3, X must have given 4 and Y must have given 8.

For D, X gave a score of 4 in P1. Y can give a score of 6 or 8 for D in P1. But Y gave a score of 8 for D in P2. Hence, Y must have given a score of 6 for D in P1.

Since Y gave a score of 8 for D in P2, X must have given a score of 2 for D in P2.

The score given by Y to D in P4 cannot be 6 or 8 (since Y gave those scores to D in P1 and P2 respectively); it cannot be 5 because Y gave a score of 5 to B in P4. Hence, Y must have given a score of 7 for D in P4.

And Y must have given a score of 5 for D in P3.

Since Z gave a score of 5 for D in P4 and Y gave a score of 7 for D in P4, X must have given a score of 3 for D in P4. X must have given a score of 1 for D in P3.

In P4, Y must have given a score of 8 to C (since he gave 5, 6 and 7 to B, A and D in P4). X has to give either 2 or 4 for C in P4. But X has given a score of 2 to A in P4. Hence, X must give a score of 4 to C in P4. X must give a score of 1 to B in P4.

In P1, Y must have given a score of 7 to C (Y gave 5 and 6 to A and D in P1; Y gave 8 to C in P4). Y must have given a score of 8 to B in P1. Y must have given a score of 6 and 7 for B in P2 and P3 respectively. Y must have given a score of 5 and 6 for C in P2 and P3 respectively.

Since Y gave a score of 6 for C in P3, X must have given 2 or 4 in the same parameter. However, X gave 4 for C in P4. Hence, X must have given 2 for C in P3. X must have given 3 for B in P3.

Also, X must have given 2 and 4 for B in P1 and P2 respectively. X must have given 3 and 1 for C in P1 and P2 respectively.

We can calculate the scores given by Z for all the candidates for all the parameters.

The scores given by each of the three members is given below.

Panel Member: X				
	P1	P2	P3	P4
A	1	3	4	2
B	2	4	3	1
C	3	1	2	4
D	4	2	1	3

Panel Member: Y				
	P1	P2	P3	P4
A	5	7	8	6
B	8	6	7	5
C	7	5	6	8
D	6	8	5	7

Panel Member: Z				
	P1	P2	P3	P4
A	3	5	6	4
B	5	5	5	3
C	5	3	4	6
D	5	5	3	5

Since the score given by Z is the average of scores given by X and Y, we can use the scores given by Z as an indication of the relative composite scores.

Hence, A received the highest composite score in P3.

Choice (C)

undefined

DIRECTIONS for questions 5 to 8: Answer the questions on the basis of the information given below.

Three panel members, X, Y and Z, interviewed four candidates - A, B, C and D. Each panel member scored each of the four candidates on four parameters - P1, P2, P3 and P4. The following tables provides partial information about the score given by each panel member to each candidate in each parameter:

Panel Member: X				
	P1	P2	P3	P4
A	1			
B				
C				
D	4			

Panel Member: Y				
	P1	P2	P3	P4
A		7		
B			5	
C				
D		8		

Panel Member: Z				
	P1	P2	P3	P4
A				4
B				
C				
D				5

The following information is known about the scores given by each panel member:

- i. In each parameter, X gave a different score to each candidate and, for each candidate, X gave a different score in each parameter.
- ii. In each parameter, Y gave a different score to each candidate and, for each candidate, Y gave a different score in each parameter.
- iii. The scores that X gave to any candidate in any parameter was a positive integer less than 5.
- iv. The scores that Y gave to any candidate in any parameter was an integer less than 9 and greater than 4.
- v. The score given by Z to any candidate in any parameter was the average of the scores given by X and Y to that candidate in that parameter.
- vi. The score given by Z to any candidate in any parameter was an integer.

Q8. DIRECTIONS for questions 5 to 8: Select the correct alternative from the given choices.

For each candidate, the scores that he received in each parameter from the three panel members were added to create a **Composite Score** for that parameter.

How many candidates received a higher **Composite Score** in P2 as compared to that in P4?

- a) 0
- b) 1
- c) 2
- d) More than 2

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	87
Difficulty Level	D
Avg. time spent on this question by students who got this question right	91
% of students who attempted this question	20.83
% of students who got the question right of those who attempted	72.14

[Video Solution](#)

[Text Solution](#)

Given that both X and Y did not give the same score for any two parameters or for any two students (from (i) and (ii)).

Also, the score that Z gave was the average of the scores that X and Y gave.

X could have given a score of 1 or 2 or 3 or 4 for any candidate in any parameter (from (iii)).

Y could have given a score of 5 or 6 or 7 or 8 for any candidate in any parameter (from (iv)).

Since Z gave an integer score, if X gives an odd score, Y must also give an odd score and vice versa. If X gives an even score, Y must also give an even score and vice versa. Only then will the score that Z gave be an integer.

For candidate A, X gave score of 1 in P1. Y must have given a score of 5 or 7 in P1 for A. Since Y gave 7 for A in P2, Y must have given 5 for A in P1.

Y gave a score of 7 for A in P2. X must have given a score of 1 or 3 in P2 for A. Since X gave a score of 1 for A in P1, X must have given a score of 3 for A in P2.

Z gave a score of 4 for A in P4. Hence, the sum of the scores given by X and Y in P4 for A must be 8. This is possible if they gave (1, 7) or (2, 6) or (3, 5). But for A, X gave a score of 1 in P1 and 3 in P2. Hence, X must have given a score of 2 in P4 for A and Y must have given a score of 6 in P4 for A.

For A in P3, X must have given 4 and Y must have given 8.

For D, X gave a score of 4 in P1. Y can give a score of 6 or 8 for D in P1. But Y gave a score of 8 for D in P2. Hence, Y must have given a score of 6 for D in P1.

Since Y gave a score of 8 for D in P2, X must have given a score of 2 for D in P2.

The score given by Y to D in P4 cannot be 6 or 8 (since Y gave those scores to D in P1 and P2 respectively); it cannot be 5 because Y gave a score of 5 to B in P4. Hence, Y must have given a score of 7 for D in P4.

And Y must have given a score of 5 for D in P3.

Since Z gave a score of 5 for D in P4 and Y gave a score of 7 for D in P4, X must have given a score of 3 for D in P4. X must have given a score of 1 for D in P3.

In P4, Y must have given a score of 8 to C (since he gave 5, 6 and 7 to B, A and D in P4). X has to give either 2 or 4 for C in P4. But X has given a score of 2 to A in P4. Hence, X must give a score of 4 to C in P4. X must give a score of 1 to B in P4.

In P1, Y must have given a score of 7 to C (Y gave 5 and 6 to A and D in P1; Y gave 8 to C in P4). Y must have given a score of 8 to B in P1. Y must have given a score of 6 and 7 for B in P2 and P3 respectively. Y must have given a score of 5 and 6 for C in P2 and P3 respectively.

Since Y gave a score of 6 for C in P3, X must have given 2 or 4 in the same parameter. However, X gave 4 for C in P4. Hence, X must have given 2 for C in P3. X must have given 3 for B in P3.

Also, X must have given 2 and 4 for B in P1 and P2 respectively. X must have given 3 and 1 for C in P1 and P2 respectively.

We can calculate the scores given by Z for all the candidates for all the parameters.

The scores given by each of the three members is given below.

Panel Member: X				Panel Member: Y				Panel Member: Z				
	P1	P2	P3	P1	P2	P3	P4	P1	P2	P3	P4	
A	1	3	4	2	5	7	8	6	3	5	6	4
B	2	4	3	1	8	6	7	5	5	5	5	3
C	3	1	2	4	7	5	6	8	5	3	4	6
D	4	2	1	3	6	8	5	7	5	5	3	5

Both A and B received a higher composite score in P2 as compared to P4.

Choice (C)

undefined

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Exactly 60 employees work in an office. During each of eight consecutive days, from Day 1 through Day 8, each of these 60 employees drank exactly one drink among tea, coffee and cola. On Day 1, an equal number of employees drank tea, coffee and cola.

The following table provides, for each day, starting from Day 2, the number of people who switched from coffee to tea, from coffee to cola, from tea to coffee, from tea to cola, from cola to coffee and from cola to tea as compared to the previous day.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee to Tea	5	3	4	6	9	7	5
Coffee to Cola	4	2	6	4	5	2	7
Tea to Coffee	8	3	3	4	2	7	1
Tea to Cola	6	6	8	2	3	1	6
Cola to Coffee	7	2	5	4	6	3	1
Cola to Tea	2	5	2	2	8	3	4

Q9. DIRECTIONS for questions 9 to 12: Type in your answer in the input box provided below the question.

How many persons drank Cola on Day 7?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	10
Avg. time spent on this question by all students	408
Difficulty Level	M
Avg. time spent on this question by students who got this question right	537
% of students who attempted this question	42.9
% of students who got the question right of those who attempted	42.71

[Video Solution](#)

Text Solution

On Day 1, the number of persons who drank each drink is 20.
 On Day 2, 5 persons switched from Coffee to Tea and 4 persons switched from Coffee to Cola.
 Hence, 9 persons switched from coffee to another drink. Hence, 11 person would still be drinking Coffee.
 However, 8 persons switched from Tea to Coffee and 7 persons switched from Cola to Coffee.
 Hence, a total of 15 persons switched to drinking Coffee. Therefore, on Day 2, a total of $11 + 15 = 26$ persons drank Coffee.
 Similarly, we can find the number of persons who drank each drink on each day.
 This is presented in the following table:

Drink	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee	20	26	26	24	22	16	17	7
Tea	20	13	12	7	9	21	23	25
Cola	20	21	22	29	29	23	20	28

20 persons drank Cola on Day 7.

Ans: (20)

undefined

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Exactly 60 employees work in an office. During each of eight consecutive days, from Day 1 through Day 8, each of these 60 employees drank exactly one drink among tea, coffee and cola. On Day 1, an equal number of employees drank tea, coffee and cola.

The following table provides, for each day, starting from Day 2, the number of people who switched from coffee to tea, from coffee to cola, from tea to coffee, from tea to cola, from cola to coffee and from cola to tea as compared to the previous day.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee to Tea	5	3	4	6	9	7	5
Coffee to Cola	4	2	6	4	5	2	7
Tea to Coffee	8	3	3	4	2	7	1
Tea to Cola	6	6	8	2	3	1	6
Cola to Coffee	7	2	5	4	6	3	1
Cola to Tea	2	5	2	2	8	3	4

Q10. DIRECTIONS for questions 9 to 12: Type in your answer in the input box provided below the question.

What is the average number of persons who drank coffee per day during the given period?

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	170
Difficulty Level	M
Avg. time spent on this question by students who got this question right	172
% of students who attempted this question	36.59
% of students who got the question right of those who attempted	21.91

[Video Solution](#)

[Text Solution](#)

On Day 1, the number of persons who drank each drink is 20.
 On Day 2, 5 persons switched from Coffee to Tea and 4 persons switched from Coffee to Cola.
 Hence, 9 persons switched from coffee to another drink. Hence, 11 person would still be drinking Coffee.
 However, 8 persons switched from Tea to Coffee and 7 persons switched from Cola to Coffee.
 Hence, a total of 15 persons switched to drinking Coffee. Therefore, on Day 2, a total of $11 + 15 = 26$ persons drank Coffee.
 Similarly, we can find the number of persons who drank each drink on each day.
 This is presented in the following table:

Drink	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee	20	26	26	24	22	16	17	7
Tea	20	13	12	7	9	21	23	25
Cola	20	21	22	29	29	23	20	28

$$\text{The average number of persons who drank coffee} = \frac{158}{8} = 19.75$$

Ans: (19.75)

undefined

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Exactly 60 employees work in an office. During each of eight consecutive days, from Day 1 through Day 8, each of these 60 employees drank exactly one drink among tea, coffee and cola. On Day 1, an equal number of employees drank tea, coffee and cola.

The following table provides, for each day, starting from Day 2, the number of people who switched from coffee to tea, from coffee to cola, from tea to coffee, from tea to cola, from cola to coffee and from cola to tea as compared to the previous day.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee to Tea	5	3	4	6	9	7	5
Coffee to Cola	4	2	6	4	5	2	7
Tea to Coffee	8	3	3	4	2	7	1
Tea to Cola	6	6	8	2	3	1	6
Cola to Coffee	7	2	5	4	6	3	1
Cola to Tea	2	5	2	2	8	3	4

Q11. DIRECTIONS for questions 9 to 12: Type in your answer in the input box provided below the question.

During the given period, on how many days did at least 15 persons drink each of the three drinks?

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	99
Difficulty Level	M
Avg. time spent on this question by students who got this question right	84
% of students who attempted this question	29.37
% of students who got the question right of those who attempted	49.15

[Video Solution](#)

[Text Solution](#)

On Day 1, the number of persons who drank each drink is 20.

On Day 2, 5 persons switched from Coffee to Tea and 4 persons switched from Coffee to Cola.

Hence, 9 persons switched from coffee to another drink. Hence, 11 person would still be drinking Coffee.

However, 8 persons switched from Tea to Coffee and 7 persons switched from Cola to Coffee.

Hence, a total of 15 persons switched to drinking Coffee. Therefore, on Day 2, a total of $11 + 15 = 26$ persons drank Coffee.

Similarly, we can find the number of persons who drank each drink on each day.

This is presented in the following table:

Drink	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee	20	26	26	24	22	16	17	7
Tea	20	13	12	7	9	21	23	25
Cola	20	21	22	29	29	23	20	28

On three days, Day 1, Day 6 and Day 7, at least 15 persons drank each of the three drinks.

Ans: (3)

undefined

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

Exactly 60 employees work in an office. During each of eight consecutive days, from Day 1 through Day 8, each of these 60

employees drank exactly one drink among tea, coffee and cola. On Day 1, an equal number of employees drank tea, coffee and cola.

The following table provides, for each day, starting from Day 2, the number of people who switched from coffee to tea, from coffee to cola, from tea to coffee, from tea to cola, from cola to coffee and from cola to tea as compared to the previous day.

	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee to Tea	5	3	4	6	9	7	5
Coffee to Cola	4	2	6	4	5	2	7
Tea to Coffee	8	3	3	4	2	7	1
Tea to Cola	6	6	8	2	3	1	6
Cola to Coffee	7	2	5	4	6	3	1
Cola to Tea	2	5	2	2	8	3	4

Q12. DIRECTIONS for questions 9 to 12: Type in your answer in the input box provided below the question.

What is the maximum number of persons who could have had coffee on each of the eight days?

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	56
Difficulty Level	VD
Avg. time spent on this question by students who got this question right	95
% of students who attempted this question	32.87
% of students who got the question right of those who attempted	2.55

[Video Solution](#)

[Text Solution](#)

On Day 1, the number of persons who drank each drink is 20.
 On Day 2, 5 persons switched from Coffee to Tea and 4 persons switched from Coffee to Cola.
 Hence, 9 persons switched from coffee to another drink. Hence, 11 person would still be drinking Coffee.
 However, 8 persons switched from Tea to Coffee and 7 persons switched from Cola to Coffee.
 Hence, a total of 15 persons switched to drinking Coffee. Therefore, on Day 2, a total of $11 + 15 = 26$ persons drank Coffee.
 Similarly, we can find the number of persons who drank each drink on each day.
 This is presented in the following table:

Drink	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Coffee	20	26	26	24	22	16	17	7
Tea	20	13	12	7	9	21	23	25
Cola	20	21	22	29	29	23	20	28

11 persons were drinking coffee on Day 1 and Day 2 (since 9 persons shifted to another drink).

Also, 15 persons switched to Coffee on Day 2.

On Day 3, 5 persons switched from Coffee. Let these 5 persons be from the 15 who switched to coffee on Day 2. Also, on Day 3, 5 persons switched to Coffee. Hence, on Day 3, the 11 persons who were drinking Coffee from Day 1 can still be drinking coffee and 15 persons who switched to coffee after Day 1.

On Day 4, there can still be 11 persons who were drinking Coffee from Day 1 and 13 persons who switched to coffee.

On Day 5, there can still be 11 persons who were drinking Coffee from Day 1 and 11 persons who switched to coffee.

On Day 6, 14 persons switched from Coffee. Hence, 3 persons who were drinking Coffee from Day 1 till Day 5 must have switched. Hence, there can be 8 persons who were drinking Coffee from Day 1 and 8 persons who switched.

On Day 7, 9 persons switched from Coffee. Hence, there can be 7 persons who were drinking Coffee from Day 1 and 10 persons who switched.

On Day 8, 12 persons switched from Coffee. Hence, there can only be 5 persons who were drinking Coffee from Day 1 and 2 persons who switched.

Therefore, a maximum of 5 persons could have been drinking Coffee from Day 1.

Ans: (5)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Seven persons - A through G - are standing in a line, from left to right, all facing the same direction. Among the seven persons, B, D, E and F are girls, while the remaining are boys. Starting from the left, each person declared the number of persons standing adjacent to him/her who are not of the same gender as him/her. The numbers that each person declared, from left to right, are 1, 1, 1, 2, 2, 2 and 1 respectively.

Further, it is known that B is standing adjacent to neither A nor C, while D is standing to the immediate right of G. Also, C is standing to the immediate left of E, who, in turn was not standing at the extreme right.

Q13. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

How many girls are standing to the right of B?

a) 0

b) 1

c) 2 Your answer is correct

C d) 3

Time spent / Accuracy Analysis

Time taken by you to answer this question	202
Avg. time spent on this question by all students	537
Difficulty Level	M
Avg. time spent on this question by students who got this question right	570
% of students who attempted this question	50.54
% of students who got the question right of those who attempted	59.78

[Video Solution](#)

[Text Solution](#)

Given that each person declared the number of persons of the opposite gender standing adjacent to him/her.

Let the person at the extreme left be a girl. Then there must be one person next to her who is a boy (since she announced 1). Hence, the next person in the line must be a boy. Since he also announced 1, the next person must be a boy (since there is already one girl to his immediate left). Since the next boy also announced 1, there must be a girl to his immediate right (since there is a boy to his immediate left). The girl announced 2. Hence, there must be a boy to her immediate right. The next boy also announced 2. Hence, there must be a girl to his immediate right. Similarly, there must be a boy next to the girl. However, in this case, there are four boys and three girls.

Hence, there must be a boy at the extreme right, followed by a girl, girl, boy, girl, boy and girl, in that order from left to right.

Let 1 to 7 represent the seven position from left to right, in that order.

Given C is standing to the immediate left of E. E was not at the extreme right. C and E can be at 4 and 5 or 1 and 2.

Consider the case where E is at 5 and C is at 4. Since B is not adjacent to C, B cannot be at 3. B can be at 2 or 7. If B is at 2, A must be at 6 (since A is not adjacent to B). In this case, D and G cannot be next to each other. If B is at 7, A must be at 1. In this case also, D and G cannot be adjacent to each other. Hence, this case is not possible.

Consider the case where E is at 2 and C is at 1. B can be at 3 or 5 or 7. If B is at 3, A cannot be at 4. Hence, A must be at 6. In this case, G and D can be at 4 and 5, and D will be to the right of G. Hence, **this case is possible**.

If B is at 5, there is no available position for A. If B is at 7, A must be at 4. Hence, D and G must be at 5 and 6. In this case, D is not to the right of G. Hence, this case is also not possible.

The following table provides the order in which they are standing:

Order	1	2	3	4	5	6	7
Person	C	E	B	G	D	A	F
Gender	Boy	Girl	Girl	Boy	Girl	Boy	Girl

Two girls (D and F) are standing to the right of B.

Choice (C)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Seven persons - A through G - are standing in a line, from left to right, all facing the same direction. Among the seven persons, B, D, E and F are girls, while the remaining are boys. Starting from the left, each person declared the number of persons standing adjacent to him/her who are not of the same gender as him/her. The numbers that each person declared, from left to right, are 1, 1, 1, 2, 2, 2 and 1 respectively.

Further, it is known that B is standing adjacent to neither A nor C, while D is standing to the immediate right of G. Also, C is standing to the immediate left of E, who, in turn was not standing at the extreme right.

Q14. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

Who among the following is standing adjacent to A?

a) D Your answer is correct

b) G

c) E

d) C

Time spent / Accuracy Analysis

Time taken by you to answer this question	16
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	52
% of students who attempted this question	48.55
% of students who got the question right of those who attempted	60.98

[Video Solution](#)

[Text Solution](#)

Given that each person declared the number of persons of the opposite gender standing adjacent to him/her.

Let the person at the extreme left be a girl. Then there must be one person next to her who is a boy (since she announced 1). Hence, the next person in the line must be a boy. Since he also announced 1, the next person must be a boy (since there is already one girl to his immediate left). Since the next boy also announced 1, there must be a girl to his immediate right (since there is a boy to his immediate left). The girl announced 2. Hence, there must be a boy to her immediate right. The next boy also announced 2. Hence, there must be a girl to his immediate right. Similarly, there must be a boy next to the girl. However, in this case, there are four boys and three girls.

Hence, there must be a boy at the extreme right, followed by a girl, girl, boy, girl, boy and girl, in that order from left to right.

Let 1 to 7 represent the seven position from left to right, in that order.

Given C is standing to the immediate left of E. E was not at the extreme right. C and E can be at 4 and 5 or 1 and 2.

Consider the case where E is at 5 and C is at 4. Since B is not adjacent to C, B cannot be at 3. B can be at 2 or 7. If B is at 2, A must be at 6 (since A is not adjacent to B). In this case, D and G cannot be next to each other. If B is at 7, A must be at 1. In this case also, D and G cannot be adjacent to each other. Hence, this case is not possible.

Consider the case where E is at 2 and C is at 1. B can be at 3 or 5 or 7. If B is at 3, A cannot be at 4. Hence, A must be at 6. In this case, G and D can be at 4 and 5, and D will be to the right of G. Hence, **this case is possible**.

If B is at 5, there is no available position for A. If B is at 7, A must be at 4. Hence, D and G must be at 5 and 6. In this case, D is not to the right of G. Hence, this case is also not possible.

The following table provides the order in which they are standing:

Order	1	2	3	4	5	6	7
Person	C	E	B	G	D	A	F
Gender	Boy	Girl	Girl	Boy	Girl	Boy	Girl

D is standing adjacent to A.

Choice (A)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Seven persons - A through G - are standing in a line, from left to right, all facing the same direction. Among the seven persons, B, D, E and F are girls, while the remaining are boys. Starting from the left, each person declared the number of persons standing adjacent to him/her who are not of the same gender as him/her. The numbers that each person declared,

from left to right, are 1, 1, 1, 2, 2, 2 and 1 respectively.

Further, it is known that B is standing adjacent to neither A nor C, while D is standing to the immediate right of G. Also, C is standing to the immediate left of E, who, in turn was not standing at the extreme right.

Q15. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

Among the seven persons, exactly two persons exchanged their places and each of them again declared the number of persons standing adjacent to him/her who are not of the same gender as him/her.

If the maximum number of persons declared the highest possible number, who among the following definitely exchanged his/her place?

- a) **E** Your answer is correct
- b) **D**
- c) **B**
- d) **G**

Time spent / Accuracy Analysis

Time taken by you to answer this question	26
Avg. time spent on this question by all students	131
Difficulty Level	D
Avg. time spent on this question by students who got this question right	128
% of students who attempted this question	29.04
% of students who got the question right of those who attempted	61.8

[Video Solution](#)

[Text Solution](#)

Given that each person declared the number of persons of the opposite gender standing adjacent to him/her.

Let the person at the extreme left be a girl. Then there must be one person next to her who is a boy (since she announced 1). Hence, the next person in the line must be a boy. Since he also announced 1, the next person must be a boy (since there is already one girl to his immediate left). Since the next boy also announced 1, there must be a girl to his immediate right (since there is a boy to his immediate left). The girl announced 2. Hence, there must be a boy to her immediate right. The next boy also announced 2. Hence, there must be a girl to his immediate right. Similarly, there must be a boy next to the girl. However, in this case, there are four boys and three girls.

Hence, there must be a boy at the extreme right, followed by a girl, girl, boy, girl, boy and girl, in that order from left to right.

Let 1 to 7 represent the seven position from left to right, in that order.

Given C is standing to the immediate left of E. E was not at the extreme right. C and E can be at 4 and 5 or 1 and 2.

Consider the case where E is at 5 and C is at 4. Since B is not adjacent to C, B cannot be at 3. B can be at 2 or 7. If B is at 2, A must be at 6 (since A is not adjacent to B). In this case, D and G cannot be next to each other. If B is at 7, A must be at 1. In this case also, D and G cannot be adjacent to each other. Hence, this case is not possible.

Consider the case where E is at 2 and C is at 1. B can be at 3 or 5 or 7. If B is at 3, A cannot be at 4. Hence, A must be at 6. In this case, G and D can be at 4 and 5, and D will be to the right of G. Hence, **this case is possible**.

If B is at 5, there is no available position for A. If B is at 7, A must be at 4. Hence, D and G must be at 5 and 6. In this case, D is not to the right of G. Hence, this case is also not possible.

The following table provides the order in which they are standing:

Order	1	2	3	4	5	6	7
Person	C	E	B	G	D	A	F
Gender	Boy	Girl	Girl	Boy	Girl	Boy	Girl

The highest possible number that any person can declare is 2 (if there are two persons of opposite gender adjacent to him/her). Further, the persons at the two ends can never declare 2 because there is only one person adjacent to him/her. For the maximum number of persons to declare 2, the boys and girls must be in alternate positions. Further, since there are four girls and three boys, they must be in the following order: girl, boy, girl, boy, girl, boy and girl. We can see that except for C and E, the other persons are already in this pattern.

Since only two persons exchanged their places C and E must have exchanged their places. From the given options, E definitely exchanged her place. Choice (A)

undefined

DIRECTIONS for questions 13 to 16: Answer the questions on the basis of the information given below.

Seven persons - A through G - are standing in a line, from left to right, all facing the same direction. Among the seven persons, B, D, E and F are girls, while the remaining are boys. Starting from the left, each person declared the number of persons standing adjacent to him/her who are not of the same gender as him/her. The numbers that each person declared, from left to right, are 1, 1, 1, 2, 2, 2 and 1 respectively.

Further, it is known that B is standing adjacent to neither A nor C, while D is standing to the immediate right of G. Also, C is standing to the immediate left of E, who, in turn was not standing at the extreme right.

Q16. DIRECTIONS for questions 13 to 16: Select the correct alternative from the given choices.

Among the seven persons, exactly two persons exchanged their places and each of them again declared the number of persons standing adjacent to him/her who are not of the same gender as him/her.

If, starting from the left, six persons declared the same number, who among the following exchanged his/her place?

~ ~ ~

b) A Your answer is correct

c) G

d) More than one of the above

Time spent / Accuracy Analysis

Time taken by you to answer this question	49
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	130
% of students who attempted this question	29.29
% of students who got the question right of those who attempted	37.89

[Video Solution](#)

[Text Solution](#)

Given that each person declared the number of persons of the opposite gender standing adjacent to him/her.

Let the person at the extreme left be a girl. Then there must be one person next to her who is a boy (since she announced 1). Hence, the next person in the line must be a boy. Since he also announced 1, the next person must be a boy (since there is already one girl to his immediate left). Since the next boy also announced 1, there must be a girl to his immediate right (since there is a boy to his immediate left). The girl announced 2. Hence, there must be a boy to her immediate right. The next boy also announced 2. Hence, there must be a girl to his immediate right. Similarly, there must be a boy next to the girl. However, in this case, there are four boys and three girls.

Hence, there must be a boy at the extreme right, followed by a girl, girl, boy, girl, boy and girl, in that order from left to right.

Let 1 to 7 represent the seven position from left to right, in that order.

Given C is standing to the immediate left of E. E was not at the extreme right. C and E can be at 4 and 5 or 1 and 2.

Consider the case where E is at 5 and C is at 4. Since B is not adjacent to C, B cannot be at 3. B can be at 2 or 7. If B is at 2, A must be at 6 (since A is not adjacent to B). In this case, D and G cannot be next to each other. If B is at 7, A must be at 1. In this case also, D and G cannot be adjacent to each other. Hence, this case is not possible.

Consider the case where E is at 2 and C is at 1. B can be at 3 or 5 or 7. If B is at 3, A cannot be at 4. Hence, A must be at 6. In this case, G and D can be at 4 and 5, and D will be to the right of G. Hence, **this case is possible**.

If B is at 5, there is no available position for A. If B is at 7, A must be at 4. Hence, D and G must be at 5 and 6. In this case, D is not to the right of G. Hence, this case is also not possible.

The following table provides the order in which they are standing:

Order	1	2	3	4	5	6	7
Person	C	E	B	G	D	A	F
Gender	Boy	Girl	Girl	Boy	Girl	Boy	Girl

Starting from the left, six persons declared the same number. The person on the extreme left could have declared only 0 or 1 (he cannot declare 2 because there is only one person adjacent to him).

If the person on the left declared 0, and the five persons following him also declared 0, all the persons in the seven places must be of the same gender. But this is not possible. Hence, they could not have declared 0.

If the six persons declared 1, then one of the ways in which they can be in the line is girl, boy, boy, girl, girl, boy and boy. But in this case, there are four boys and is not possible.

They also can be in line in the following manner: boy, girl, girl, boy, boy, girl and girl. In this case, the first six persons will all declare 1 and there are four girls.

Given that only one pair of persons exchanged their places. We can observe that C, E, B, G and F already satisfy the above order. If only one pair of persons exchanged their positions, D and A must exchange their positions.

Hence, from the given options, A exchanged his position.

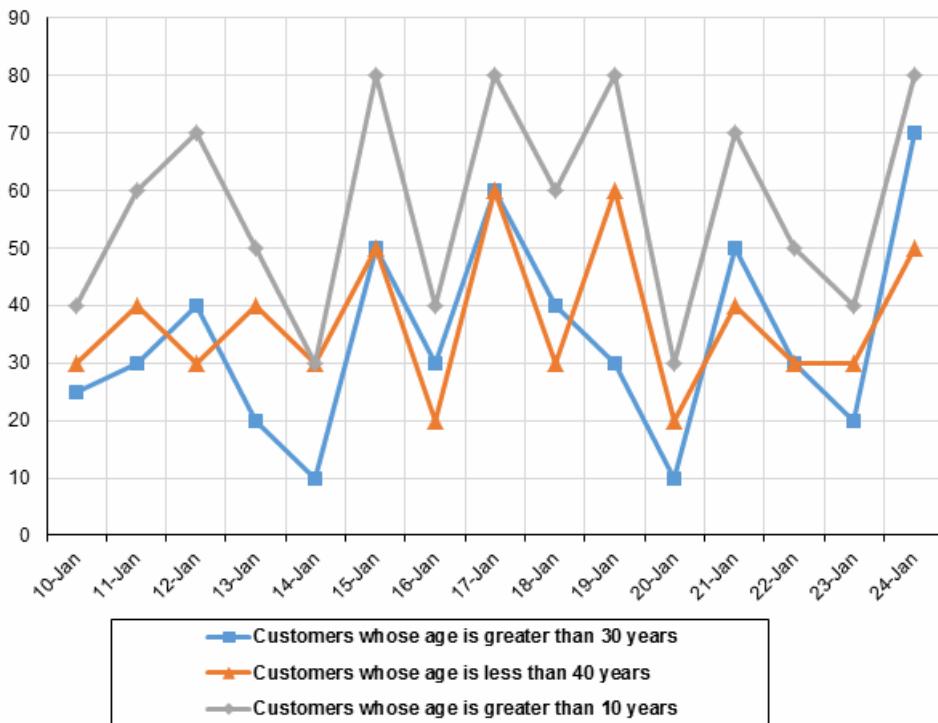
Choice (B)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

Kiran, the owner of a restaurant, tracks the number of customers of different ages who visited his restaurant on 15 days, from January 10th to January 24th. He observed that no customer whose age is 10 years or less visited his restaurant during the given time.

He made the following line graph which provides the number of customers of different age groups who visited his restaurant on each of the 15 days:



Q17. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

Tarun, a 38-year-old businessman, visited the restaurant on one of the 15 days. On which of the following days did he definitely not visit the restaurant?

- a) 13th January
- b) 16th January
- c) 20th January
- d) 23rd January

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	20
Avg. time spent on this question by all students	294
Difficulty Level	E
Avg. time spent on this question by students who got this question right	325
% of students who attempted this question	30.38
% of students who got the question right of those who attempted	39.11

[Video Solution](#)

[Text Solution](#)

The line chart provides the number of customers whose age is greater than 10, greater than 30 and less than 40.

Also, since no one whose age is 10 or less visited the restaurant, the total number of customers who visited will be the same as the number of customers whose age is greater than 10.

Also, we can find the number of customers whose age is greater than 10 and at most 30 by subtracting the number of customers whose age is greater than 30 from the number of customers whose age is greater than 10.

We can find the number of customers whose age is at least 40 by subtracting the number of customers whose age is less than 40 from the total number of customers (i.e., the number of customers whose age is greater than 10).

We can find the number of customers whose age is greater than 30 but less than 40 by subtracting the above two values from the total number of customers.

The following table provides these values:

Date	Age greater than 10 and at most 30	Age greater than 30 and less than 40	At least 40
10-Jan	15	15	10
11-Jan	30	10	20
12-Jan	30	0	40
13-Jan	30	10	10
14-Jan	20	10	0
15-Jan	30	20	30
16-Jan	10	10	20
17-Jan	20	40	20
18-Jan	20	10	30
19-Jan	50	10	20
20-Jan	20	0	10
21-Jan	20	20	30
22-Jan	20	10	20
23-Jan	20	10	10
24-Jan	10	40	30

Among the given days, no one whose age was greater than 30 and less than 40 visited the restaurant on 20th January. Hence, Tarun could not have visited the restaurant on 20th January.

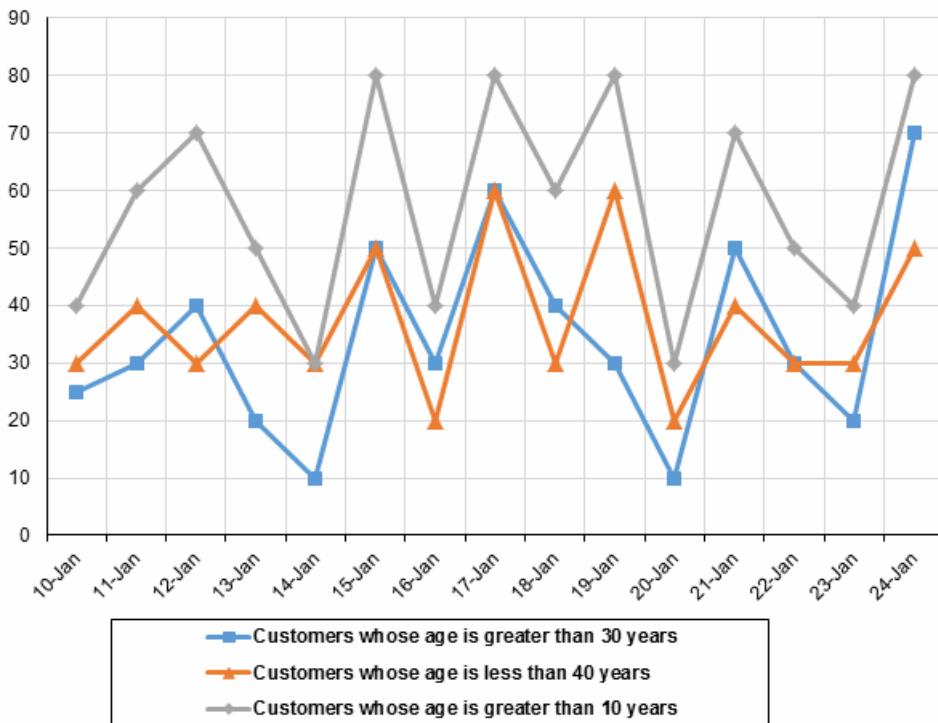
Choice (C)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

Kiran, the owner of a restaurant, tracks the number of customers of different ages who visited his restaurant on 15 days, from January 10th to January 24th. He observed that no customer whose age is 10 years or less visited his restaurant during the given time.

He made the following line graph which provides the number of customers of different age groups who visited his restaurant on each of the 15 days:



Q18. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

If, on a particular day, the average age of all the persons who visited the restaurant was less than 20, which of the following days can it be?

- a) 13th January
- b) 14th January
- c) 20th January
- d) 23rd January

You did not answer this question 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	148
Difficulty Level	D
Avg. time spent on this question by students who got this question right	156
% of students who attempted this question	24.31
% of students who got the question right of those who attempted	36.89

[Video Solution](#)

[Text Solution](#)

The line chart provides the number of customers whose age is greater than 10, greater than 30 and less than 40.

Also, since no one whose age is 10 or less visited the restaurant, the total number of customers who visited will be the same as the number of customers whose age is greater than 10.

Also, we can find the number of customers whose age is greater than 10 and at most 30 by subtracting the number of customers whose age is greater than 30 from the number of customers whose age is greater than 10.

We can find the number of customers whose age is at least 40 by subtracting the number of customers whose age is less than 40 from the total number of customers (i.e., the number of customers whose age is greater than 10).

We can find the number of customers whose age is greater than 30 but less than 40 by subtracting the above two values from the total number of customers.

The following table provides these values:

Date	Age greater than 10 and at most 30	Age greater than 30 and less than 40	At least 40
10-Jan	15	15	10
11-Jan	30	10	20
12-Jan	30	0	40
13-Jan	30	10	10
14-Jan	20	10	0
15-Jan	30	20	30
16-Jan	10	10	20
17-Jan	20	40	20
18-Jan	20	10	30
19-Jan	50	10	20
20-Jan	20	0	10
21-Jan	20	20	30
22-Jan	20	10	20
23-Jan	20	10	10
24-Jan	10	40	30

For the average age to be less than 20, the number of persons whose age is less than 30 as a percentage of the total number of persons must be high.

By observation, we can see that this is highest on 14th Jan and 20th Jan.

The minimum possible average age for 14th Jan = $\frac{20 \times 11 + 10 \times 31}{30} = 17.67$

Minimum possible average age for 20th Jan = $\frac{20 \times 11 + 10 \times 40}{30} = 20.67$

Hence, the given condition is possible on 14th January.

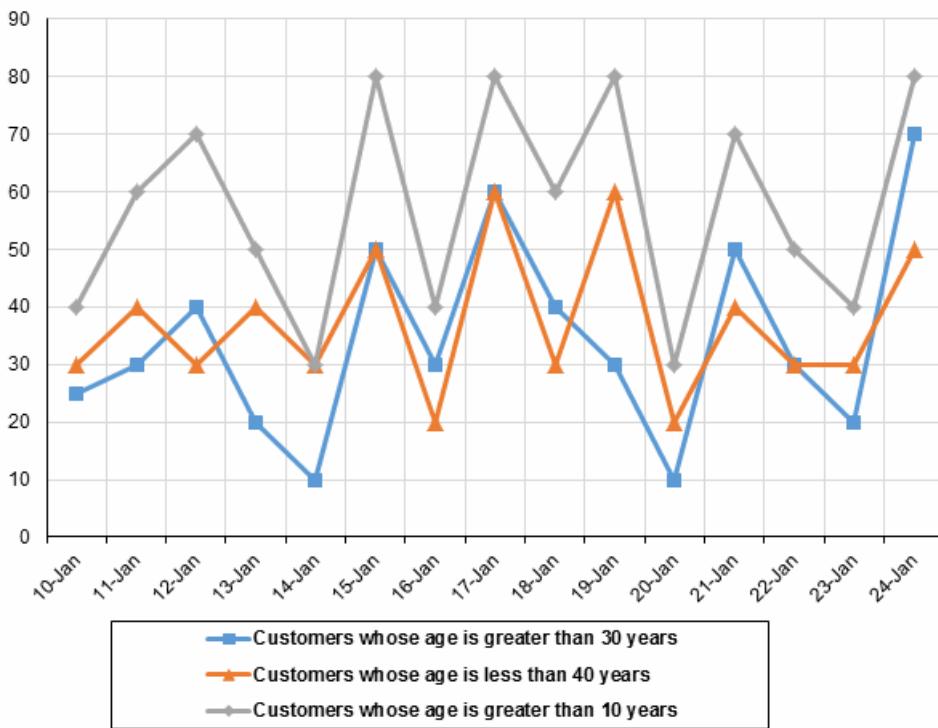
Choice (B)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

Kiran, the owner of a restaurant, tracks the number of customers of different ages who visited his restaurant on 15 days, from January 10th to January 24th. He observed that no customer whose age is 10 years or less visited his restaurant during the given time.

He made the following line graph which provides the number of customers of different age groups who visited his restaurant on each of the 15 days:



Q19. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

Rita, a 11-year-old girl, gave a birthday party in the restaurant on one of the 15 days. Exactly ten of Rita's friends, who were all of the same age as Rita and none of whom were siblings, attended the party along with her. If each child at the party was accompanied by both his/her parents, who were all in their 30s, on which day did Rita give her birthday party?

- a) 17th January
- b) 24th January
- c) 21st January
- 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	1
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	153
% of students who attempted this question	18.93
% of students who got the question right of those who attempted	17.91

[Video Solution](#)

[Text Solution](#)

The line chart provides the number of customers whose age is greater than 10, greater than 30 and less than 40.

Also, since no one whose age is 10 or less visited the restaurant, the total number of customers who visited will be the same as the number of customers whose age is greater than 10.

Also, we can find the number of customers whose age is greater than 10 and at most 30 by subtracting the number of customers whose age is greater than 30 from the number of customers whose age is greater than 10.

We can find the number of customers whose age is at least 40 by subtracting the number of customers whose age is less than 40 from the total number of customers (i.e., the number of customers whose age is greater than 10).

We can find the number of customers whose age is greater than 30 but less than 40 by subtracting the above two values from the total number of customers.

The following table provides these values:

Date	Age greater than 10 and at most 30	Age greater than 30 and less than 40	At least 40
10-Jan	15	15	10
11-Jan	30	10	20
12-Jan	30	0	40
13-Jan	30	10	10
14-Jan	20	10	0
15-Jan	30	20	30
16-Jan	10	10	20
17-Jan	20	40	20
18-Jan	20	10	30
19-Jan	50	10	20
20-Jan	20	0	10
21-Jan	20	20	30
22-Jan	20	10	20
23-Jan	20	10	10
24-Jan	10	40	30

On the day of the birthday party, 11 customers whose age is 11 years (Rita and her friends) visited the restaurant.

Also, there must be 22 parents in their 30s. Hence, at least 11 customers whose age is between 10 and 30 must have visited the restaurant. At least 22 customers whose age is between 30 and 40 must have visited the restaurant.

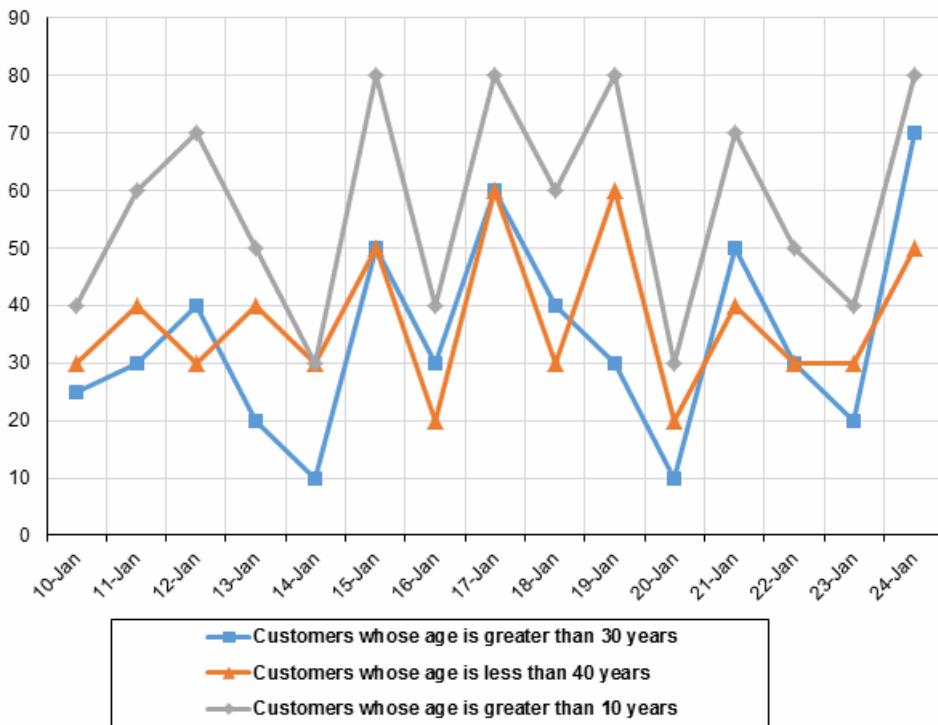
The only day on which this is possible is 17th Jan. Hence, this must be the day of Rita's birthday party. Choice (A)

undefined

DIRECTIONS for questions 17 to 20: Answer the questions on the basis of the information given below.

Kiran, the owner of a restaurant, tracks the number of customers of different ages who visited his restaurant on 15 days, from January 10th to January 24th. He observed that no customer whose age is 10 years or less visited his restaurant during the given time.

He made the following line graph which provides the number of customers of different age groups who visited his restaurant on each of the 15 days:



Q20. DIRECTIONS for questions 17 to 20: Select the correct alternative from the given choices.

On a particular day, fifteen 13-year-old boys, nineteen 34-year-old men and twenty-one 42-year-old women visited the restaurant. What is the maximum number of 15-year-old girls who could have visited the restaurant on that day?

- a) 5
- b) 15
- c) 10
- d) 20

You did not answer this question

[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	158
Difficulty Level	M
Avg. time spent on this question by students who got this question right	176
% of students who attempted this question	8.77
% of students who got the question right of those who attempted	44.66

[Video Solution](#)

[Text Solution](#)

The line chart provides the number of customers whose age is greater than 10, greater than 30 and less than 40.

Also, since no one whose age is 10 or less visited the restaurant, the total number of customers who visited will be the same as the number of customers whose age is greater than 10.

Also, we can find the number of customers whose age is greater than 10 and at most 30 by subtracting the number of customers whose age is greater than 30 from the number of customers whose age is greater than 10.

We can find the number of customers whose age is at least 40 by subtracting the number of customers whose age is less than 40 from the total number of customers (i.e., the number of customers whose age is greater than 10).

We can find the number of customers whose age is greater than 30 but less than 40 by subtracting the above two values from the total number of customers.

The following table provides these values:

Date	Age greater than 10 and at most 30	Age greater than 30 and less than 40	At least 40
10-Jan	15	15	10
11-Jan	30	10	20
12-Jan	30	0	40
13-Jan	30	10	10
14-Jan	20	10	0
15-Jan	30	20	30
16-Jan	10	10	20
17-Jan	20	40	20
18-Jan	20	10	30
19-Jan	50	10	20
20-Jan	20	0	10
21-Jan	20	20	30
22-Jan	20	10	20
23-Jan	20	10	10
24-Jan	10	40	30

From the given information, the day can be 15th January or 21st January. Among these two days, on 15th January, a maximum of 15 15-year-old girls could have visited the restaurant.

On 21st January, only 5 could have visited the restaurant.

Hence, the maximum number of 15-year-old girls that could have visited the restaurant is 15.

Choice (B)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Exactly three persons, Hari, Krish and Ram, participated in a weightlifting competition, comprising three rounds, in which each person lifts a weight exactly once in each of the three rounds. After the three persons participate in the three rounds,

the *Combined Total Weight*, which is defined as the sum of the heaviest two weights lifted in any round by a person, is calculated for each of the three persons. The three persons are then ranked, from 1 to 3, in the descending order of their *Combined Total Weights*. No person lifted the same weight across any two rounds and the *Combined Total Weight* for each person was distinct. Further, the weight (in kg) that each person lifted was an integer.

Ram lifted 17 kg more in the first round than Krish did in that round, while Hari lifted the same weight in the second round as Krish did in the third round. Also, the round in which a person lifted his least weight was distinct for the three persons. The difference in the weight lifted by Krish in the first round and that by Ram in the third round was 20 kg, while the difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Krish lifted 25 kg more in the second round than Hari did in the first round. The *Combined Total Weight* for Hari was calculated using the weights that he lifted in the first and second rounds. Further, Ram lifted 15 kg more in the second round than Krish did in the third round.

Q21. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If Ram was ranked first in the competition, then what is the maximum difference (in kg) in the weights lifted by Hari in the first round and Krish in the first round?

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	306
Difficulty Level	D
Avg. time spent on this question by students who got this question right	259
% of students who attempted this question	7.48
% of students who got the question right of those who attempted	3.54

[Video Solution](#)

[Text Solution](#)

Given that Ram lifted 17 kg more than Krish in the first round. Let the weight that Krish lifted in the first round be a . The weight that Ram lifted in the first round will be $a + 17$. Let the weight that Hari lifted in the second round be b . The weight that Krish lifted in the third round is also b .

Given that the difference in the weights lifted by Krish in the first round and that by Ram in the third round was 20 kg. Hence, the weight that Ram lifted in the third round can be $a \pm 20$.

The difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Hence, the weight that Hari lifted in the third round will be $a + 17 \pm 18 = (a - 1)$ or $(a + 35)$.

Krish lifted 25 kg more in the second round than Hari did in the first round. Let Hari lift c kgs in the first round. Hence, Krish lifted $c + 25$ kg in the second round.

Also, Ram lifted 15 kg more in the second round than Krish did in the third round. Since Krish lifted b kgs in the third round, Ram must have lifted $b + 15$ kg in the second round. For Hari, the weights he lifted in the first and second rounds were the top two weights. In the three rounds, Hari lifted c, b and $(a - 1)$ or $(a + 35)$. Both c and b must definitely be greater than $a - 1$.

Since Krish lifted $a, c + 25$ and b in the three rounds, $c + 25$ must be in the top 2 (this is because c is greater than $a - 1$ and hence, $c + 25$ will be greater than a). Each person lifted the least weight in a different round. Hence, Krish could not have lifted the least weight in the third round (because Hari lifted the least weight in the third round). Krish must have lifted the least weight in the first round. For Krish, the weights in the second and third round would have been considered.

For Ram, the weights in the first and third rounds will be considered. Since Ram lifted $a + 17, b + 15$ and $a + 20$ in the three rounds, $a + 17$ must be greater than $b + 15 \Rightarrow b < a + 2$.

For Hari, the weight that he lifted in the third round cannot be $a + 35$ (this is because $b < a + 2$ and if Hari lifted $a + 35$ in the third round, it will definitely be greater than b). Hence, Hari lifted c, b and $a - 1$ in the three rounds. Since the weights in first and second rounds were considered, $b > a - 1$.

Hence, $a - 1 < b < a + 2$. Since a, b and c are all integers, b can be equal to a or $a + 1$.

But, if $b = a$, Krish would have lifted the same weight in first and third rounds. Hence, b cannot be equal to a and $b = a + 1$.

Since $b = a + 1$, Ram must have lifted $a + 20$ in the third round (if he lifted $a - 20$ in the third round, it would be the least weight that he lifted, which is not possible).

The following table provides the weights that each person lifted and the Combined Total Weight in terms of a and c :

Person	First Round	Second Round	Third Round	Combined Total Weight
Hari	c	$a + 1$	$a - 1$	$a + c + 1$
Krish	a	$c + 25$	$a + 1$	$a + c + 26$
Ram	$a + 17$	$a + 16$	$a + 20$	$2a + 37$

If Ram was ranked first, $2a + 37 > a + c + 26 \Rightarrow c < a + 11$

However, from the first and third round of Hari, $c > a - 1$.

Hence, $a - 1 < c < a + 11$

We need to maximize the difference in the weights lifted by Hari in his first attempt and Krish in his first attempt, i.e., we need to maximize the difference between c and a .

The maximum difference of c and a occurs when $c = a + 10$. The maximum difference is 10 kg. Ans: (10)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Exactly three persons, Hari, Krish and Ram, participated in a weightlifting competition, comprising three rounds, in which each person lifts a weight exactly once in each of the three rounds. After the three persons participate in the three rounds, the *Combined Total Weight*, which is defined as the sum of the heaviest two weights lifted in any round by a person, is calculated for each of the three persons. The three persons are then ranked, from 1 to 3, in the descending order of their *Combined Total Weights*. No person lifted the same weight across any two rounds and the *Combined Total Weight* for each person was distinct. Further, the weight (in kg) that each person lifted was an integer.

Ram lifted 17 kg more in the first round than Krish did in that round, while Hari lifted the same weight in the second round as Krish did in the third round. Also, the round in which a person lifted his least weight was distinct for the three persons. The difference in the weight lifted by Krish in the first round and that by Ram in the third round was 20 kg, while the difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Krish lifted 25 kg more in the second round than Hari did in the first round. The *Combined Total Weight* for Hari was calculated using the weights that he lifted in the first and second rounds. Further, Ram lifted 15 kg more in the second round than Krish did in the third round.

Q22. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If Krish was ranked first in the competition, what is the minimum difference (in kg) between the highest weight that any person lifted in any round and the lowest weight that any person lifted in any round?

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	50
Difficulty Level	D
Avg. time spent on this question by students who got this question right	56
% of students who attempted this question	5.93
% of students who got the question right of those who attempted	0.4

[Video Solution](#)

[Text Solution](#)

Given that Ram lifted 17 kg more than Krish in the first round. Let the weight that Krish lifted in the first round be a . The weight that Ram lifted in the first round will be $a + 17$. Let the weight that Hari lifted in the second round be b . The weight that Krish lifted in the third round is also b .

Given that the difference in the weights lifted by Krish in the first round and that by Ram in the third round was 20 kg. Hence, the weight that Ram lifted in the third round can be $a \pm 20$.

The difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Hence, the weight that Hari lifted in the third round will be $a + 17 \pm 18 = (a - 1)$ or $(a + 35)$.

Krish lifted 25 kg more in the second round than Hari did in the first round. Let Hari lift c kgs in the first round. Hence, Krish lifted $c + 25$ kg in the second round.

Also, Ram lifted 15 kg more in the second round than Krish did in the third round. Since Krish lifted b kgs in the third round, Ram must have lifted $b + 15$ kg in the second round. For Hari, the weights he lifted in the first and second rounds were the top two weights. In the three rounds, Hari lifted c , b and $(a - 1)$ or $(a + 35)$. Both c and b must definitely be greater than $a - 1$.

Since Krish lifted a , $c + 25$ and b in the three rounds, $c + 25$ must be in the top 2 (this is because c is greater than $a - 1$ and hence, $c + 25$ will be greater than a). Each person lifted the least weight in a different round. Hence, Krish could not have lifted the least weight in the third round (because Hari lifted the least weight in the third round). Krish must have lifted the least weight in the first round. For Krish, the weights in the second and third round would have been considered.

For Ram, the weights in the first and third rounds will be considered. Since Ram lifted $a + 17$, $b + 15$ and $a + 20$ in the three rounds, $a + 17$ must be greater than $b + 15 \Rightarrow b < a + 2$.

For Hari, the weight that he lifted in the third round cannot be $a + 35$ (this is because $b < a + 2$ and if Hari lifted $a + 35$ in the third round, it will definitely be greater than b). Hence, Hari lifted c , b and $a - 1$ in the three rounds. Since the weights in first and second rounds were considered, $b > a - 1$.

Hence, $a - 1 < b < a + 2$. Since a , b and c are all integers, b can be equal to a or $a + 1$.

But, if $b = a$, Krish would have lifted the same weight in first and third rounds. Hence, b cannot be equal to a and $b = a + 1$.

Since $b = a + 1$, Ram must have lifted $a + 20$ in the third round (if he lifted $a - 20$ in the third round, it would be the least weight that he lifted, which is not possible).

The following table provides the weights that each person lifted and the Combined Total Weight in terms of a and c :

Person	First Round	Second Round	Third Round	Combined Total Weight
Hari	c	$a + 1$	$a - 1$	$a + c + 1$
Krish	a	$c + 25$	$a + 1$	$a + c + 26$
Ram	$a + 17$	$a + 16$	$a + 20$	$2a + 37$

If Krish was ranked first in the competition, $a + c + 26 > 2a + 37 \Rightarrow c > a + 11$

Since c is greater than $a + 11$, $c + 25$ will be greater than $a + 36$. Hence, the highest weight that any one lifted must be $c + 25$ and the least weight is $a - 1$.

We need to minimize the difference between the highest weight and the lowest weight that any person lifted in any attempt, i.e., we need to minimize the value of $(c + 25) - (a - 1)$.

The minimum value of $c = a + 12$. Hence, the minimum difference = $a + 12 + 25 - a + 1 = 38$ kg.

Ans: (38)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Exactly three persons, Hari, Krish and Ram, participated in a weightlifting competition, comprising three rounds, in which each person lifts a weight exactly once in each of the three rounds. After the three persons participate in the three rounds, the *Combined Total Weight*, which is defined as the sum of the heaviest two weights lifted in any round by a person, is calculated for each of the three persons. The three persons are then ranked, from 1 to 3, in the descending order of their *Combined Total Weights*. No person lifted the same weight across any two rounds and the *Combined Total Weight* for each person was distinct. Further, the weight (in kg) that each person lifted was an integer.

Ram lifted 17 kg more in the first round than Krish did in that round, while Hari lifted the same weight in the second round as Krish did in the third round. Also, the round in which a person lifted his least weight was distinct for the three persons. The difference in the weight lifted by Krish in the first round and that by Ram in the third round was 20 kg, while the difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Krish lifted 25 kg more in the second round than Hari did in the first round. The *Combined Total Weight* for Hari was calculated using the weights that he lifted in the first and second rounds. Further, Ram lifted 15 kg more in the second round than Krish did in the third round.

Q23. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If Hari was ranked second in the competition, what is the minimum difference (in kg) between the weight that Krish lifted in the second round and the weight that Ram lifted in the second round?

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	39
Difficulty Level	D
Avg. time spent on this question by students who got this question right	63
% of students who attempted this question	5.22
% of students who got the question right of those who attempted	0.27

[Video Solution](#)

[Text Solution](#)

Given that Ram lifted 17 kg more than Krish in the first round. Let the weight that Krish lifted in the first round be a . The weight that Ram lifted in the first round will be $a + 17$. Let the weight that Hari lifted in the second round be b . The weight that Krish lifted in the third round is also b .

Given that the difference in the weights lifted by Krish in the first round and that by Ram in the third round was 20 kg. Hence, the weight that Ram lifted in the third round can be $a \pm 20$.

The difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Hence, the weight that Hari lifted in the third round will be $a + 17 \pm 18 = (a - 1)$ or $(a + 35)$.

Krish lifted 25 kg more in the second round than Hari did in the first round. Let Hari lift c kgs in the first round. Hence, Krish lifted $c + 25$ kg in the second round.

Also, Ram lifted 15 kg more in the second round than Krish did in the third round. Since Krish lifted b kgs in the third round, Ram must have lifted $b + 15$ kg in the second round. For Hari, the weights he lifted in the first and second rounds were the top two weights. In the three rounds, Hari lifted c , b and $(a - 1)$ or $(a + 35)$. Both c and b must definitely be greater than $a - 1$.

Since Krish lifted a , $c + 25$ and b in the three rounds, $c + 25$ must be in the top 2 (this is because c is greater than $a - 1$ and hence, $c + 25$ will be greater than a). Each person lifted the least weight in a different round. Hence, Krish could not have lifted the least weight in the third round (because Hari lifted the least weight in the third round). Krish must have lifted the least weight in the first round. For Krish, the weights in the second and third round would have been considered.

For Ram, the weights in the first and third rounds will be considered. Since Ram lifted $a + 17$, $b + 15$ and $a + 20$ in the three rounds, $a + 17$ must be greater than $b + 15 \Rightarrow b < a + 2$.

For Hari, the weight that he lifted in the third round cannot be $a + 35$ (this is because $b < a + 2$ and if Hari lifted $a + 35$ in the third round, it will definitely be greater than b). Hence, Hari lifted c , b and $a - 1$ in the three rounds. Since the weights in first and second rounds were considered, $b > a - 1$.

Hence, $a - 1 < b < a + 2$. Since a , b and c are all integers, b can be equal to a or $a + 1$.

But, if $b = a$, Krish would have lifted the same weight in first and third rounds. Hence, b cannot be equal to a and $b = a + 1$.

Since $b = a + 1$, Ram must have lifted $a + 20$ in the third round (if he lifted $a - 20$ in the third round, it would be the least weight that he lifted, which is not possible).

The following table provides the weights that each person lifted and the Combined Total Weight in terms of a and c :

Person	First Round	Second Round	Third Round	Combined Total Weight
Hari	c	$a + 1$	$a - 1$	$a + c + 1$
Krish	a	$c + 25$	$a + 1$	$a + c + 26$
Ram	$a + 17$	$a + 16$	$a + 20$	$2a + 37$

If Hari was ranked second in the competition, Krish must have been ranked first and Ram must have been ranked last.

Hence, $2a + 37 < a + c + 1 \Rightarrow c > a + 36$.

We need to minimize the value of $(c + 25) - (a + 16)$.

The minimum possible value of $c = a + 37$.

Hence, the minimum possible difference = $a + 37 + 25 - (a + 16) = 46$ kg.

Ans: (46)

undefined

DIRECTIONS for questions 21 to 24: Answer the questions on the basis of the information given below.

Exactly three persons, Hari, Krish and Ram, participated in a weightlifting competition, comprising three rounds, in which each person lifts a weight exactly once in each of the three rounds. After the three persons participate in the three rounds, the *Combined Total Weight*, which is defined as the sum of the heaviest two weights lifted in any round by a person, is calculated for each of the three persons. The three persons are then ranked, from 1 to 3, in the descending order of their *Combined Total Weights*. No person lifted the same weight across any two rounds and the *Combined Total Weight* for each person was distinct. Further, the weight (in kg) that each person lifted was an integer.

Ram lifted 17 kg more in the first round than Krish did in that round, while Hari lifted the same weight in the second round as Krish did in the third round. Also, the round in which a person lifted his least weight was distinct for the three persons. The difference in the weight lifted by Krish in the first round and that by Ram in the third round was 20 kg, while the difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Krish lifted 25 kg more in the second round than Hari did in the first round. The *Combined Total Weight* for Hari was calculated using the weights that he lifted in the first and second rounds. Further, Ram lifted 15 kg more in the second round than Krish did in the third round.

Q24. DIRECTIONS for questions 21 to 24: Type in your answer in the input box provided below the question.

If the weights lifted by each person in the second round were all distinct integral multiples of 15, what is the minimum *Combined Total Weight* (in kg) of the person who was ranked first?

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	51
Difficulty Level	D
Avg. time spent on this question by students who got this question right	87
% of students who attempted this question	4.64
% of students who got the question right of those who attempted	1.73

[Video Solution](#)

[Text Solution](#)

Given that Ram lifted 17 kg more than Krish in the first round. Let the weight that Krish lifted in the first round be a . The weight that Ram lifted in the first round will be $a + 17$. Let the weight that Hari lifted in the second round be b . The weight that Krish lifted in the third round is also b .

Given that the difference in the weights lifted by Krish in the first round and that by Ram in the third round was 20 kg. Hence, the weight that Ram lifted in the third round can be $a \pm 20$.

The difference in the weights lifted by Ram in the first round and Hari in the third round was 18 kg. Hence, the weight that Hari lifted in the third round will be $a + 17 \pm 18 = (a - 1)$ or $(a + 35)$.

Krish lifted 25 kg more in the second round than Hari did in the first round. Let Hari lift c kgs in the first round. Hence, Krish lifted $c + 25$ kg in the second round.

Also, Ram lifted 15 kg more in the second round than Krish did in the third round. Since Krish lifted b kgs in the third round, Ram must have lifted $b + 15$ kg in the second round. For Hari, the weights he lifted in the first and second rounds were the top two weights. In the three rounds, Hari lifted c , b and $(a - 1)$ or $(a + 35)$. Both c and b must definitely be greater than $a - 1$.

Since Krish lifted a , $c + 25$ and b in the three rounds, $c + 25$ must be in the top 2 (this is because c is greater than $a - 1$ and hence, $c + 25$ will be greater than a). Each person lifted the least weight in a different round. Hence, Krish could not have lifted the least weight in the third round (because Hari lifted the least weight in the third round). Krish must have lifted the least weight in the first round. For Krish, the weights in the second and third round would have been considered.

For Ram, the weights in the first and third rounds will be considered. Since Ram lifted $a + 17$, $b + 15$ and $a + 20$ in the three rounds, $a + 17$ must be greater than $b + 15 \Rightarrow b < a + 2$.

For Hari, the weight that he lifted in the third round cannot be $a + 35$ (this is because $b < a + 2$ and if Hari lifted $a + 35$ in the third round, it will definitely be greater than b). Hence, Hari lifted c , b and $a - 1$ in the three rounds. Since the weights in first and second rounds were considered, $b > a - 1$.

Hence, $a - 1 < b < a + 2$. Since a , b and c are all integers, b can be equal to a or $a + 1$.

But, if $b = a$, Krish would have lifted the same weight in first and third rounds. Hence, b cannot be equal to a and $b = a + 1$.

Since $b = a + 1$, Ram must have lifted $a + 20$ in the third round (if he lifted $a - 20$ in the third round, it would be the least weight that he lifted, which is not possible).

The following table provides the weights that each person lifted and the Combined Total Weight in terms of a and c :

Person	First Round	Second Round	Third Round	Combined Total Weight
Hari	c	$a + 1$	$a - 1$	$a + c + 1$
Krish	a	$c + 25$	$a + 1$	$a + c + 26$
Ram	$a + 17$	$a + 16$	$a + 20$	$2a + 37$

For $a + 1$ and $a + 16$ to be multiples of 15, a must be of the form $15k - 1$.

The minimum possible value of $a = 14$.

Since $c + 25$ must be a distinct integral multiple of 15, $c + 25$ can be a minimum of 45. Hence, $c = 20$.

In this case, Ram would be ranked first and the Combined Total Weight for Ram = 65 kg.

If we take $c = 5$ (to minimize the value of $c + 25$), then a must be at least 44 (a cannot be 14 because $a + 16$ will be equal to $c + 25$; a cannot be 29 because $a + 1$ will be equal to $c + 25$).

In this case, Ram would still be first. But the Combined Total Weight = 125 kg.

Hence, the minimum Combined Total Weight = 65 kg.

Ans: (65)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

Raghu, an assistant to the dean of a college, was given a task to tabulate the courses taken by the students in the college. The students can take any number of courses among SE, SPM, TD, IE, CS, CM and QM. He prepared a table comprising

eight columns, with the students' names mentioned in the first column and the remaining seven columns, i.e., the second column to the eighth column, representing the seven courses, in the same order, from left to right, as mentioned above. In the row corresponding to every student, Raghu marked every cell corresponding to a course that the student took with a tick and every cell corresponding to a course that the student did not take with a cross.

After preparing the table, he made the following observations:

- i. The student in the first row of the table took all the courses.
- ii. The student in the second row took all the courses except for the courses in the second and eighth columns.
- iii. The student in the third row took all the courses except for the courses in the second, third, seventh and eighth columns.
- iv. The student in the fourth row took all the courses except for the courses in the second, third, fourth, sixth, seventh and eighth columns.
- v. The students in the fifth, sixth and seventh rows took the same courses as the students in the third, second and first rows respectively.
- vi. This pattern mentioned from (i) through (v) repeats, starting from the seventh row for all the students in the table, and continues repeating until the last row.

Q25. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

If the number of students who took at least three courses was 309, how many students are there in the college?

- a) 371 **Your answer is correct**
- b) 370
- c) 368
- d) Cannot be determined

Time spent / Accuracy Analysis

Time taken by you to answer this question	439
Avg. time spent on this question by all students	406
Difficulty Level	M
Avg. time spent on this question by students who got this question right	465
% of students who attempted this question	18.96
% of students who got the question right of those who attempted	28.63

[Video Solution](#)

[Text Solution](#)

From the given information, we can represent the courses that the students took as in the following table:

Student	SE	SPM	TD	IE	CS	CM	QM
1	✓	✓	✓	✓	✓	✓	✓
2	✗	✓	✓	✓	✓	✓	✗
3	✗	✗	✓	✓	✓	✗	✗
4	✗	✗	✗	✓	✗	✗	✗
5	✗	✗	✓	✓	✓	✗	✗
6	✗	✓	✓	✓	✓	✓	✗
7	✓	✓	✓	✓	✓	✓	✓
8	✗	✓	✓	✓	✓	✓	✗

The pattern in the first six rows of the table will keep repeating for the students in the next rows.

Out of every 6 students, 5 would have taken at least three courses.

Given that the number of students who took at least three courses = 309

Number of students in the college will be approximately $309 \times 6/5 = 370.8$

If there were 370 students in the college, 61 batches of 6 students will be present along with 4 students extra. Among these 61 batches, $61 \times 5 = 305$ students would have taken at least three courses.

Among the 4 extra students, 3 students would have taken at least three courses. The number of students who took at least three courses, in this case, will be $305 + 3 = 308$. Therefore, this is not possible.

If there were 371 students, 61 batches of 6 students will be present along with 5 extra students.

Among these 61 batches, $61 \times 5 = 305$ students would have taken at least three courses.

Among the 5 extra students, 4 students would have taken at least three courses. The number of students who took at least three courses, in this case, will be $305 + 4 = 309$.

Hence, there must be 371 students in the college.

Choice (A)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

Raghu, an assistant to the dean of a college, was given a task to tabulate the courses taken by the students in the college. The students can take any number of courses among SE, SPM, TD, IE, CS, CM and QM. He prepared a table comprising eight columns, with the students' names mentioned in the first column and the remaining seven columns, i.e., the second column to the eighth column, representing the seven courses, in the same order, from left to right, as mentioned above. In the row corresponding to every student, Raghu marked every cell corresponding to a course that the student took with a tick and every cell corresponding to a course that the student did not take with a cross.

After preparing the table, he made the following observations:

- i. The student in the first row of the table took all the courses.
- ii. The student in the second row took all the courses except for the courses in the second and eighth columns.

iii.

The student in the third row took all the courses except for the courses in the second, third, seventh and eighth columns.

iv.

The student in the fourth row took all the courses except for the courses in the second, third, fourth, sixth, seventh and eighth columns.

v.

The students in the fifth, sixth and seventh rows took the same courses as the students in the third, second and first rows respectively.

vi.

This pattern mentioned from (i) through (v) repeats, starting from the seventh row for all the students in the table, and continues repeating until the last row.

Q26. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

If exactly 58 students in the college took TD, how many students are there in the college?

a) **69** Your answer is incorrect

b) **70**

c) **66**

d) **Cannot be determined**

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question **416**

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 **103**

% of students who attempted this question **18.35**

% of students who got the question right of those who attempted **28.17**

[Video Solution](#)

[Text Solution](#)

From the given information, we can represent the courses that the students took as in the following table:

Student	SE	SPM	TD	IE	CS	CM	QM
1	✓	✓	✓	✓	✓	✓	✓
2	✗	✓	✓	✓	✓	✓	✗
3	✗	✗	✓	✓	✓	✗	✗
4	✗	✗	✗	✓	✗	✗	✗
5	✗	✗	✓	✓	✓	✗	✗
6	✗	✓	✓	✓	✓	✓	✗
7	✓	✓	✓	✓	✓	✓	✓
8	✗	✓	✓	✓	✓	✓	✗

The pattern in the first six rows of the table will keep repeating for the students in the next rows.

Given that 58 students in the college took TD. 5 out of 6 students in the college took TD. The number of students in the college will be approximately $58 \times 6/5 \cong 69.6$. If there are 69 students in the college, then there will be 11 batches of 6 and 3 students extra.

Among the 11 batches, there will be $11 \times 5 = 55$ students who took TD. The 3 students would also have taken TD. Hence, in this case, there will be 58 students who took TD. However, even if there were one additional student in the college, he would not have taken TD (because he would have taken only one course). Hence, even if there were 70 students in the college, only 58 students would have taken TD.

Hence, the number of students in the college can be 69 or 70 and the answer cannot be determined.

Choice (D)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

Raghu, an assistant to the dean of a college, was given a task to tabulate the courses taken by the students in the college. The students can take any number of courses among SE, SPM, TD, IE, CS, CM and QM. He prepared a table comprising eight columns, with the students' names mentioned in the first column and the remaining seven columns, i.e., the second column to the eighth column, representing the seven courses, in the same order, from left to right, as mentioned above. In the row corresponding to every student, Raghu marked every cell corresponding to a course that the student took with a tick and every cell corresponding to a course that the student did not take with a cross.

After preparing the table, he made the following observations:

- i. The student in the first row of the table took all the courses.
- ii. The student in the second row took all the courses except for the courses in the second and eighth columns.
- iii. The student in the third row took all the courses except for the courses in the second, third, seventh and eighth columns.
- iv. The student in the fourth row took all the courses except for the courses in the second, third, fourth, sixth, seventh and eighth columns.
- v. The students in the fifth, sixth and seventh rows took the same courses as the students in the third, second and first rows respectively.
- vi. This pattern mentioned from (i) through (v) repeats, starting from the seventh row for all the students in the table, and continues repeating until the last row.

Q27. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

If there were 153 students in the college, how many students took TD but did not take CM?

- a) 50
- b) 51 Your answer is correct
- c) 52
- d) 53

Time spent / Accuracy Analysis

Time taken by you to answer this question	131
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	98
% of students who attempted this question	11.81
% of students who got the question right of those who attempted	62.29

[Video Solution](#)

[Text Solution](#)

From the given information, we can represent the courses that the students took as in the following table:

Student	SE	SPM	TD	IE	CS	CM	QM
1	✓	✓	✓	✓	✓	✓	✓
2	✗	✓	✓	✓	✓	✓	✗
3	✗	✗	✓	✓	✓	✗	✗
4	✗	✗	✗	✓	✗	✗	✗
5	✗	✗	✓	✓	✓	✗	✗
6	✗	✓	✓	✓	✓	✓	✗
7	✓	✓	✓	✓	✓	✓	✓
8	✗	✓	✓	✓	✓	✓	✗

The pattern in the first six rows of the table will keep repeating for the students in the next rows.

Given that there are 150 students in the college. Out of every 6 students, 2 students took TD but not CM.

153 can be divided into 25 batches of 6 and 3 additional students.

Of the 25 batches, there will be $25 \times 2 = 50$ students who satisfy the given condition.

Among the 3 additional students, only 1 student satisfies the given condition.

Hence, there will be $50 + 1 = 51$ students who took TD but not CM.

Choice (B)

undefined

DIRECTIONS for questions 25 to 28: Answer the questions on the basis of the information given below.

Raghu, an assistant to the dean of a college, was given a task to tabulate the courses taken by the students in the college. The students can take any number of courses among SE, SPM, TD, IE, CS, CM and QM. He prepared a table comprising eight columns, with the students' names mentioned in the first column and the remaining seven columns, i.e., the second column to the eighth column, representing the seven courses, in the same order, from left to right, as mentioned above. In the row corresponding to every student, Raghu marked every cell corresponding to a course that the student took with a tick and every cell corresponding to a course that the student did not take with a cross.

After preparing the table, he made the following observations:

i.

The student in the first row of the table took all the courses.

- ii. The student in the second row took all the courses except for the courses in the second and eighth columns.
- iii. The student in the third row took all the courses except for the courses in the second, third, seventh and eighth columns.
- iv. The student in the fourth row took all the courses except for the courses in the second, third, fourth, sixth, seventh and eighth columns.
- v. The students in the fifth, sixth and seventh rows took the same courses as the students in the third, second and first rows respectively.
- vi. This pattern mentioned from (i) through (v) repeats, starting from the seventh row for all the students in the table, and continues repeating until the last row.

Q28. DIRECTIONS for questions 25 to 28: Select the correct alternative from the given choices.

If the ratio of the number of students who took SPM to the number of students who took CS was 10:17, what is the number of students in the college?

- a) **40**
- b) **41**
- c) **43**
- d) **44**

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	206
Avg. time spent on this question by all students	137
Difficulty Level	D
Avg. time spent on this question by students who got this question right	153
% of students who attempted this question	6.88
% of students who got the question right of those who attempted	46.01

[Video Solution](#)

[Text Solution](#)

From the given information, we can represent the courses that the students took as in the following table:

Student	SE	SPM	TD	IE	CS	CM	QM
1	✓	✓	✓	✓	✓	✓	✓
2	✗	✓	✓	✓	✓	✓	✗
3	✗	✗	✓	✓	✓	✗	✗
4	✗	✗	✗	✓	✗	✗	✗
5	✗	✗	✓	✓	✓	✗	✗
6	✗	✓	✓	✓	✓	✓	✗
7	✓	✓	✓	✓	✓	✓	✓
8	✗	✓	✓	✓	✓	✓	✗

The pattern in the first six rows of the table will keep repeating for the students in the next rows.

The number of students who took SPM will vary depending on the number of students in the college.

If the number of students in the college is $6n$, there will be $3n$ students who took SPM.

If the number of students in the college is $6n+1$, there will be $3n+1$ students who took SPM.

If the number of students in the college is $6n+2$, there will be $3n+2$ students who took SPM.

If the number of students in the college is $6n+3$ or $6n + 4$ or $6n + 5$, there will still be $3n+2$ students who took SPM.

Similarly, if the number of students in the college is $6n$ or $6n + 1$ or $6n + 2$ or $6n + 3$ or $6n + 4$ or $6n + 5$, the number of students who took CS can be $5n$ or $5n + 1$ or $5n + 2$ or $5n + 3$ or $5n + 4$ respectively.

Given that the ratio of the students who took SPM to those who took CS is 10:17.

If there are $6n$ students in the college, this ratio will be 3:5.

If there are $6n + 1$ students in the college, then $\frac{3n+1}{5n+1} = \frac{10}{17} \Rightarrow 51n + 17 = 50n +$

10. But n will be negative in this case. Hence, this is not possible

If there are $6n + 2$ students in the college, then $\frac{3n+2}{5n+2} = \frac{10}{17} \Rightarrow 51n + 34 = 50n +$

20. But n will be negative in this case as well. Hence, this is also not possible.

If there are $6n + 3$ students in the college, then $\frac{3n+2}{5n+3} = \frac{10}{17} \Rightarrow 51n + 34 = 50n +$

30. n will be negative in this case as well.

If there are $6n + 4$ students in the college, then we will get the same equation as above (since the number of students studying either subject will not change). n will be negative in this case as well.

If there are $6n + 5$ students in the college, then $\frac{3n+2}{5n+4} = \frac{10}{17} \Rightarrow 51n + 34 = 50n +$

$40 \Rightarrow n = 6$.

In this case, there will be $36 + 5 = 41$ students in the college.

Hence, only one case is possible and there must be 41 students in the college.

Choice (B)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Exactly six persons, Amit, Gagan, Kiran, Larry, Omar and Piyush, work in an office. On a particular day, each person came to the office at a different time among 10:00 AM, 11:00 AM, 12 noon, 1:00 PM, 2:00 PM and 3:00 PM. Further, each person left the office at a different time among 2:00 PM, 3:00 PM, 4:00 PM, 5:00 PM, 6:00 PM and 7:00 PM. Also, each person spent at least one hour in the office on that day.

The following information is known about the times at which each person came to the office and left the office:

- i. For exactly two hours during the day, there were exactly two other persons along with Larry in the office, while for exactly two hours during the day, there was exactly one other person along with Omar in the office.
- ii. Amit, who came to the office one hour after Kiran, left the office before Piyush, while Larry, who was not the last to leave the office, stayed in the office for three hours more than Piyush.
- iii. Gagan came to the office at least two hours after Larry came but was not the last person to come to the office.
- iv. Piyush came to the office before Kiran and left the office before Omar.

Q29. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

Who was the first person to come to the office?

- a) **Larry**
- b) **Omar**
- c) **Piyush**
- 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	266
Avg. time spent on this question by all students	366
Difficulty Level	D
Avg. time spent on this question by students who got this question right	458
% of students who attempted this question	15.4
% of students who got the question right of those who attempted	25.91

[Video Solution](#)

[Text Solution](#)

From the given timings of when the persons came and left the office, we can see that between 10 and 11 there will be one person in the office, between 11 and 12, there will be two persons in the office, between 12 and 1, there will be three persons in the office, between 1 and 4, there will be 4 persons in the office (as each hour, one person will come and one will leave), between 4 and 5, there will be 3 persons in the office, between 5 and 6, there will be 2 persons in the office and between 6 and 7, there will be one person in the office.

Hence, during the day, there will be exactly 2 hours (from 12 to 1 and from 4 to 5) when there will be exactly three persons in the office. From (i), Larry was present in the office during both these hours. Hence, Larry must have come to the office by at most 12 and left the office after at least 5.

Similarly, there are only 2 hours (from 11 to 12 and from 5 to 6) when there will be exactly two persons in the office. Hence, Omar must have come to the office by at most 11 and left the office after at least 6.

From (ii), Amit came after Kiran. Hence, Kiran was not the last person to come to the office. From (iii), Gagan was not the last person to come to the office. From (iv), Piyush was also not the last person to come to the office (since he came before Kiran). Also, neither Omar nor Larry can be the last person to come to the office. Hence, Amit must have been the last person to come to the office.

From (ii), Amit came one hour after Kiran. Hence, Kiran must have come to the office at

2.

From (iii), Gagan came to the office at least two hours after Larry. Hence, Gagan could have come at 12/1. From this, we can say that Larry could not have come at 12 (as Gagan could not have come two hours after 12). Hence, Larry could have come at 10/11. Hence, both Larry and Omar could have come at only 10/11. Hence, Piyush and Gagan must have come at 12/1.

Amit could have left the office at 4/5/6/7. From (ii), Amit left before Piyush. Hence, Amit could have left at 4/5/6.

From (iv), Piyush left before Omar. Hence, Piyush could have left at 2/3/4/5/6. However, Piyush cannot leave before 5 (as Amar can only leave earliest at 4). Hence, Piyush could have left at 5/6.

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left at 3. Hence, Kiran must have left at 3.

Among the remaining persons, except for Amit, none of the others could have left at 4. Hence, Amit must have left at 4.

From (ii), Larry was not the last to leave the office. Hence, Larry could have left at 5/6. Since Piyush also could have left only at 5/6, Omar must have left at 7.

The possibilities for each person are in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	12/1	2
Kiran	2	3
Larry	10/11	5/6
Omar	10/11	7
Piyush	12/1	5/6

From (ii), Larry stayed for three hours more than Piyush. From the given cases, Piyush can stay in the office for 4 or 5 or 6 hours. Larry can stay in the office for 6 or 7 or 8 hours.

For the difference to be 3 hours, Piyush could have stayed for 4 or 5 hours and Larry could have stayed for 7 or 8 hours.

Consider that Piyush stayed for 4 hours and Larry stayed for 7 hours. Piyush must have come to the office at 1 and left at 5. In this case, Larry must have left at 6 and would have come at 11. Gagan would have come to the office at 12 (since Piyush came at 1). However, this violates condition (iii). Hence, this is not possible.

Consider that Piyush stayed for 5 hours and Larry stayed for 8 hours. Larry must have come at 10 and left at 6. Piyush must have left at 5 and come at 12. Gagan must have come at 1. This is the only possible case.

This is presented in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	1	2
Kiran	2	3
Larry	10	6
Omar	11	7
Piyush	12	5

The first person to come to the office was Larry.

Choice (A)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Exactly six persons, Amit, Gagan, Kiran, Larry, Omar and Piyush, work in an office. On a particular day, each person came to the office at a different time among 10:00 AM, 11:00 AM, 12 noon, 1:00 PM, 2:00 PM and 3:00 PM. Further, each person left the office at a different time among 2:00 PM, 3:00 PM, 4:00 PM, 5:00 PM, 6:00 PM and 7:00 PM. Also, each person

spent at least one hour in the office on that day.

The following information is known about the times at which each person came to the office and left the office:

i.

For exactly two hours during the day, there were exactly two other persons along with Larry in the office, while for exactly two hours during the day, there was exactly one other person along with Omar in the office.

ii.

Amit, who came to the office one hour after Kiran, left the office before Piyush, while Larry, who was not the last to leave the office, stayed in the office for three hours more than Piyush.

iii.

Gagan came to the office at least two hours after Larry came but was not the last person to come to the office.

iv.

Piyush came to the office before Kiran and left the office before Omar.

Q30. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

How many of the six persons stayed for only one hour in the office?

- a) 0
- b) 2
- c) 3
- d) 4

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	89
Difficulty Level	D
Avg. time spent on this question by students who got this question right	61
% of students who attempted this question	10.11
% of students who got the question right of those who attempted	15.29

[Video Solution](#)

[Text Solution](#)

From the given timings of when the persons came and left the office, we can see that between 10 and 11 there will be one person in the office, between 11 and 12, there will be two persons in the office, between 12 and 1, there will be three persons in the office, between 1 and 4, there will be 4 persons in the office (as each hour, one person will come and one will leave), between 4 and 5, there will be 3 persons in the office, between 5 and 6, there will be 2 persons in the office and between 6 and 7, there will be one person in the office.

Hence, during the day, there will be exactly 2 hours (from 12 to 1 and from 4 to 5) when there will be exactly three persons in the office. From (i), Larry was present in the office during both these hours. Hence, Larry must have come to the office by at most 12 and left the office after at least 5.

Similarly, there are only 2 hours (from 11 to 12 and from 5 to 6) when there will be exactly two persons in the office. Hence, Omar must have come to the office by at most 11 and left the office after at least 6.

From (ii), Amit came after Kiran. Hence, Kiran was not the last person to come to the office. From (iii), Gagan was not the last person to come to the office. From (iv), Piyush was also not the last person to come to the office (since he came before Kiran). Also, neither Omar nor Larry can be the last person to come to the office. Hence, Amit must

have been the last person to come to the office.
 From (ii), Amit came one hour after Kiran. Hence, Kiran must have come to the office at 2.
 From (iii), Gagan came to the office at least two hours after Larry. Hence, Gagan could have come at 12/1. From this, we can say that Larry could not have come at 12 (as Gagan could not have come two hours after 12). Hence, Larry could have come at 10/11. Hence, both Larry and Omar could have come at only 10/11. Hence, Piyush and Gagan must have come at 12/1.

Amit could have left the office at 4/5/6/7. From (ii), Amit left before Piyush. Hence, Amit could have left at 4/5/6.

From (iv), Piyush left before Omar. Hence, Piyush could have left at 2/3/4/5/6. However, Piyush cannot leave before 5 (as Amar can only leave earliest at 4). Hence, Piyush could have left at 5/6.

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left at 3. Hence, Kiran must have left at 3.

Among the remaining persons, except for Amit, none of the others could have left at 4. Hence, Amit must have left at 4.

From (ii), Larry was not the last to leave the office. Hence, Larry could have left at 5/6. Since Piyush also could have left only at 5/6, Omar must have left at 7.

The possibilities for each person are in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	12/1	2
Kiran	2	3
Larry	10/11	5/6
Omar	10/11	7
Piyush	12/1	5/6

From (ii), Larry stayed for three hours more than Piyush. From the given cases, Piyush can stay in the office for 4 or 5 or 6 hours. Larry can stay in the office for 6 or 7 or 8 hours.

For the difference to be 3 hours, Piyush could have stayed for 4 or 5 hours and Larry could have stayed for 7 or 8 hours.

Consider that Piyush stayed for 4 hours and Larry stayed for 7 hours. Piyush must have come to the office at 1 and left at 5. In this case, Larry must have left at 6 and would have come at 11. Gagan would have come to the office at 12 (since Piyush came at 1). However, this violates condition (iii). Hence, this is not possible.

Consider that Piyush stayed for 5 hours and Larry stayed for 8 hours. Larry must have come at 10 and left at 6. Piyush must have left at 5 and come at 12. Gagan must have come at 1. This is the only possible case.

This is presented in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	1	2
Kiran	2	3
Larry	10	6
Omar	11	7
Piyush	12	5

Three persons (Amit, Gagan and Kiran) stayed only for one hour in the office.

Choice (C)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Exactly six persons, Amit, Gagan, Kiran, Larry, Omar and Piyush, work in an office. On a particular day, each person came to the office at a different time among 10:00 AM, 11:00 AM, 12 noon, 1:00 PM, 2:00 PM and 3:00 PM. Further, each person

left the office at a different time among 2:00 PM, 3:00 PM, 4:00 PM, 5:00 PM, 6:00 PM and 7:00 PM. Also, each person spent at least one hour in the office on that day.

The following information is known about the times at which each person came to the office and left the office:

- i. For exactly two hours during the day, there were exactly two other persons along with Larry in the office, while for exactly two hours during the day, there was exactly one other person along with Omar in the office.
- ii. Amit, who came to the office one hour after Kiran, left the office before Piyush, while Larry, who was not the last to leave the office, stayed in the office for three hours more than Piyush.
- iii. Gagan came to the office at least two hours after Larry came but was not the last person to come to the office.
- iv. Piyush came to the office before Kiran and left the office before Omar.

Q31. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

Who came to the office immediately after Gagan did?

- a) **Piyush**
- b) **Omar**
- c) **Amit**
- d) **Kiran**

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	59
Difficulty Level	D
Avg. time spent on this question by students who got this question right	54
% of students who attempted this question	11.54
% of students who got the question right of those who attempted	19.01

[Video Solution](#)

[Text Solution](#)

From the given timings of when the persons came and left the office, we can see that between 10 and 11 there will be one person in the office, between 11 and 12, there will be two persons in the office, between 12 and 1, there will be three persons in the office, between 1 and 4, there will be 4 persons in the office (as each hour, one person will come and one will leave), between 4 and 5, there will be 3 persons in the office, between 5 and 6, there will be 2 persons in the office and between 6 and 7, there will be one person in the office.

Hence, during the day, there will be exactly 2 hours (from 12 to 1 and from 4 to 5) when there will be exactly three persons in the office. From (i), Larry was present in the office during both these hours. Hence, Larry must have come to the office by at most 12 and left the office after at least 5.

Similarly, there are only 2 hours (from 11 to 12 and from 5 to 6) when there will be exactly two persons in the office. Hence, Omar must have come to the office by at most 11 and left the office after at least 6.

From (ii), Amit came after Kiran. Hence, Kiran was not the last person to come to the office. From (iii), Gagan was not the last person to come to the office. From (iv), Piyush was also not the last person to come to the office (since he came before Kiran). Also

was also not the last person to come to the office (since he came before Kiran), hence, neither Omar nor Larry can be the last person to come to the office. Hence, Amit must have been the last person to come to the office.

From (ii), Amit came one hour after Kiran. Hence, Kiran must have come to the office at 2.

From (iii), Gagan came to the office at least two hours after Larry. Hence, Gagan could have come at 12/1. From this, we can say that Larry could not have come at 12 (as Gagan could not have come two hours after 12). Hence, Larry could have come at 10/11. Hence, both Larry and Omar could have come at only 10/11. Hence, Piyush and Gagan must have come at 12/1.

Amit could have left the office at 4/5/6/7. From (ii), Amit left before Piyush. Hence, Amit could have left at 4/5/6.

From (iv), Piyush left before Omar. Hence, Piyush could have left at 2/3/4/5/6. However, Piyush cannot leave before 5 (as Amar can only leave earliest at 4). Hence, Piyush could have left at 5/6.

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left at 3. Hence, Kiran must have left at 3.

Among the remaining persons, except for Amit, none of the others could have left at 4. Hence, Amit must have left at 4.

From (ii), Larry was not the last to leave the office. Hence, Larry could have left at 5/6. Since Piyush also could have left only at 5/6, Omar must have left at 7.

The possibilities for each person are in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	12/1	2
Kiran	2	3
Larry	10/11	5/6
Omar	10/11	7
Piyush	12/1	5/6

From (ii), Larry stayed for three hours more than Piyush. From the given cases, Piyush can stay in the office for 4 or 5 or 6 hours. Larry can stay in the office for 6 or 7 or 8 hours.

For the difference to be 3 hours, Piyush could have stayed for 4 or 5 hours and Larry could have stayed for 7 or 8 hours.

Consider that Piyush stayed for 4 hours and Larry stayed for 7 hours. Piyush must have come to the office at 1 and left at 5. In this case, Larry must have left at 6 and would have come at 11. Gagan would have come to the office at 12 (since Piyush came at 1). However, this violates condition (iii). Hence, this is not possible.

Consider that Piyush stayed for 5 hours and Larry stayed for 8 hours. Larry must have come at 10 and left at 6. Piyush must have left at 5 and come at 12. Gagan must have come at 1. This is the only possible case.

This is presented in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	1	2
Kiran	2	3
Larry	10	6
Omar	11	7
Piyush	12	5

Kiran came to the office immediately after Gagan did.

Choice (D)

undefined

DIRECTIONS for questions 29 to 32: Answer the questions on the basis of the information given below.

Exactly six persons, Amit, Gagan, Kiran, Larry, Omar and Piyush, work in an office. On a particular day, each person came

to the office at a different time among 10:00 AM, 11:00 AM, 12 noon, 1:00 PM, 2:00 PM and 3:00 PM. Further, each person left the office at a different time among 2:00 PM, 3:00 PM, 4:00 PM, 5:00 PM, 6:00 PM and 7:00 PM. Also, each person spent at least one hour in the office on that day.

The following information is known about the times at which each person came to the office and left the office:

- i. For exactly two hours during the day, there were exactly two other persons along with Larry in the office, while for exactly two hours during the day, there was exactly one other person along with Omar in the office.
- ii. Amit, who came to the office one hour after Kiran, left the office before Piyush, while Larry, who was not the last to leave the office, stayed in the office for three hours more than Piyush.
- iii. Gagan came to the office at least two hours after Larry came but was not the last person to come to the office.
- iv. Piyush came to the office before Kiran and left the office before Omar.

Q32. DIRECTIONS for questions 29 to 32: Select the correct alternative from the given choices.

Who among the following was in the office at 4:10 PM?

- a) **Amit**
- b) **Gagan**
- c) **Piyush**
- d) **More than one of the above**

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	31
Avg. time spent on this question by all students	293
Difficulty Level	D
Avg. time spent on this question by students who got this question right	372
% of students who attempted this question	10.73
% of students who got the question right of those who attempted	11.41

[Video Solution](#)

[Text Solution](#)

From the given timings of when the persons came and left the office, we can see that between 10 and 11 there will be one person in the office, between 11 and 12, there will be two persons in the office, between 12 and 1, there will be three persons in the office, between 1 and 4, there will be 4 persons in the office (as each hour, one person will come and one will leave), between 4 and 5, there will be 3 persons in the office, between 5 and 6, there will be 2 persons in the office and between 6 and 7, there will be one person in the office.

Hence, during the day, there will be exactly 2 hours (from 12 to 1 and from 4 to 5) when there will be exactly three persons in the office. From (i), Larry was present in the office during both these hours. Hence, Larry must have come to the office by at most 12 and left the office after at least 5.

Similarly, there are only 2 hours (from 11 to 12 and from 5 to 6) when there will be exactly two persons in the office. Hence, Omar must have come to the office by at most 11 and left the office after at least 6.

From (ii), Amit came after Kiran. Hence, Kiran was not the last person to come to the

office. From (iii), Gagan was not the last person to come to the office. From (iv), Piyush was also not the last person to come to the office (since he came before Kiran). Also, neither Omar nor Larry can be the last person to come to the office. Hence, Amit must have been the last person to come to the office.

From (ii), Amit came one hour after Kiran. Hence, Kiran must have come to the office at 2.

From (iii), Gagan came to the office at least two hours after Larry. Hence, Gagan could have come at 12/1. From this, we can say that Larry could not have come at 12 (as Gagan could not have come two hours after 12). Hence, Larry could have come at 10/11. Hence, both Larry and Omar could have come at only 10/11. Hence, Piyush and Gagan must have come at 12/1.

Amit could have left the office at 4/5/6/7. From (ii), Amit left before Piyush. Hence, Amit could have left at 4/5/6.

From (iv), Piyush left before Omar. Hence, Piyush could have left at 2/3/4/5/6. However, Piyush cannot leave before 5 (as Amar can only leave earliest at 4). Hence, Piyush could have left at 5/6.

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left

Between Gagan and Kiran, Kiran could not have left at 2. Also, none of the others could have left at 2. Hence, Gagan must have left at 2.

Also, among the remaining persons, except for Kiran, none of the others could have left at 3. Hence, Kiran must have left at 3.

Among the remaining persons, except for Amit, none of the others could have left at 4. Hence, Amit must have left at 4.

From (ii), Larry was not the last to leave the office. Hence, Larry could have left at 5/6. Since Piyush also could have left only at 5/6, Omar must have left at 7.

The possibilities for each person are in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	12/1	2
Kiran	2	3
Larry	10/11	5/6
Omar	10/11	7
Piyush	12/1	5/6

From (ii), Larry stayed for three hours more than Piyush. From the given cases, Piyush can stay in the office for 4 or 5 or 6 hours. Larry can stay in the office for 6 or 7 or 8 hours.

For the difference to be 3 hours, Piyush could have stayed for 4 or 5 hours and Larry could have stayed for 7 or 8 hours.

Consider that Piyush stayed for 4 hours and Larry stayed for 7 hours. Piyush must have come to the office at 1 and left at 5. In this case, Larry must have left at 6 and would have come at 11. Gagan would have come to the office at 12 (since Piyush came at 1). However, this violates condition (iii). Hence, this is not possible.

Consider that Piyush stayed for 5 hours and Larry stayed for 8 hours. Larry must have come at 10 and left at 6. Piyush must have left at 5 and come at 12. Gagan must have come at 1. This is the only possible case.

This is presented in the following table:

Person	Came at	Left at
Amit	3	4
Gagan	1	2
Kiran	2	3
Larry	10	6
Omar	11	7
Piyush	12	5

Piyush was in the office at 4:10 PM.

Choice (C)

undefined

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

Solution B is prepared by evaporating some of the water contained in solution A, which contains water and sulphuric acid in the ratio 2 : 1. If solution B contains water and sulphuric acid in the ratio 1 : 2, what percent of the water in solution A has been evaporated to obtain solution B?

- a) 50%
- b) $66\frac{2}{3}\%$
- c) 75%
- d) $83\frac{1}{3}\%$

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	17
Avg. time spent on this question by all students	155
Difficulty Level	E
Avg. time spent on this question by students who got this question right	141
% of students who attempted this question	41.95
% of students who got the question right of those who attempted	52.75

[Video Solution](#)

[Text Solution](#)

Consider 300 ml of solution A. It contains 100 ml of sulphuric acid and 200 ml of water. Solution B contains 100 ml sulphuric acid and 50 ml water. Therefore, by evaporating 150 ml out of 200 ml of water in solution A, we get solution B.
 \therefore Fraction of water evaporated is $150/200 = 75\%$. Choice (C)

undefined

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

Rohan and his wife, Sita, went to Bangalore on a holiday. During their stay there, Rohan went jogging, while Sita went walking during a number of mornings. There were a total of 16 mornings when Rohan did not go jogging and there were a total of 18 mornings when Sita did not go for a walk. Further, there were 14 mornings when Rohan went for a jog and also Sita went for a walk. If it is known that there was no morning when both stayed indoors, how many days did they stay in Bangalore?

Your Answer:34 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	296
Avg. time spent on this question by all students	182
Difficulty Level	E
Avg. time spent on this question by students who got this question right	172
% of students who attempted this question	37.5
% of students who got the question right of those who attempted	41.72

[Video Solution](#)

[Text Solution](#)

Let the number of days that both stayed in Bangalore be N. Number of days that Rohan jogged = $N - 16$. Number of days that Rohan jogged and Sita did not walk = $N - 16 - 14 = N - 30$. Number of days that Sita walked and Rohan did not jog = $N - 18 - 14 = N - 32$.

Number of days that Rohan walked and Sita jogged = 14.

$$\therefore N - 30 + N - 32 + 14 = N \\ N = 48.$$

Alternative solution:

Number of days on which Rohan did not jog = Number of days on which only Sita walked = 16

Number of days on which Rohan jogged and Sita walked = 14

Number of days on which only Rohan jogged = Number of days on which Sita did not walk = 18

$$\text{Total} = 16 + 14 + 18 = 48$$

Ans: (48)

undefined

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

In a group of boys and girls, there are three girls. On every friendship day, each of the members of the group would send an email to the others to wish them. On one friendship day, a total of N emails were sent. The total number of emails sent by the boys to other boys was $N - 96$. Find the number of emails that the girls sent to the boys. Assume that no emails were sent on that day except for wishing.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	83
Avg. time spent on this question by all students	210
Difficulty Level	E
Avg. time spent on this question by students who got this question right	247
% of students who attempted this question	22.06
% of students who got the question right of those who attempted	27.63

[Video Solution](#)

[Text Solution](#)

Let the number of members in the group be P.
 Total number of emails sent = $P(P - 1)$
 Number of boys = $P - 3$
 Number of emails sent by the boys to other boys = $(P - 3)(P - 4)$
 $\therefore N = P(P - 1)$ and $N - 96 = (P - 3)(P - 4)$
 $P(P - 1) - 96 = (P - 3)(P - 4)$
 $P^2 - P = P^2 - 7P + 12$
 $6P = 108$
 $P = 18$
 \therefore There are 15 boys.
 Number of emails sent by the girls to the boys = $(3)(15) = 45$.

Alternative solution:

Given, $(G \rightarrow G) + (G \rightarrow B) + (B \rightarrow G) + (B \rightarrow B) = N$, where $(G \rightarrow G)$ means the number of mails sent by girls to other girls, $(G \rightarrow B)$ means the number of mails sent by girls to boys and so on.
 Here, as there are three girls, $(G \rightarrow G) = 6$
 Also $(G \rightarrow B)$ is equal to $(B \rightarrow G)$
 Given, $(B \rightarrow B) = N - 96$
 $\therefore (G \rightarrow B) + (B \rightarrow G) = N - (N - 96) - 6 = 90$
 $\therefore (G \rightarrow B) = (B \rightarrow G) = 45$ Ans: (45)

undefined

Q4. DIRECTIONS for questions 4 to 6: Select the correct alternative from the given choices.

If a rectangle of breadth 10 units has an area equal to the area of the circle drawn with its length as the diameter, what is the perimeter of the rectangle?

- a) $10 + \frac{5}{\pi}$
- b) $10 + \frac{10}{\pi}$
- c) $10 + \frac{15}{\pi}$
- d) $20 + \frac{80}{\pi}$ Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	102
Avg. time spent on this question by all students	145

Time spent / Accuracy Analysis

Difficulty Level	E
Avg. time spent on this question by students who got this question right	142
% of students who attempted this question	46.51
% of students who got the question right of those who attempted	89.67

[Video Solution](#)

Text Solution

Let the length of the rectangle be ℓ .

\Rightarrow diameter of the circle = ℓ .

$$\therefore 10b = \pi \left(\frac{\ell^2}{4} \right) \Rightarrow \ell = \frac{40}{\pi}$$

$$\therefore \text{perimeter of the rectangle} = 2(\ell + b) = 20 + \frac{80}{\pi}$$

Choice (D)

undefined

Q5. DIRECTIONS for questions 4 to 6: Select the correct alternative from the given choices.

If $|x - 2| + |x + 4| < 6$, then which of the following is true of the possible values that x can assume?

- a) $0 \leq x \leq 2$.
- b) $2 < x < 3$.
- c) $3 \leq x$. Your answer is incorrect
- d) **None of the above**

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	73
Avg. time spent on this question by all students	113
Difficulty Level	M
Avg. time spent on this question by students who got this question right	115
% of students who attempted this question	46.36
% of students who got the question right of those who attempted	71.33

[Video Solution](#)

Text Solution

$|x - 2|$ represents the distance of the 'point' x from the point 2 on the number line. Similarly, $|x + 4|$ is the distance of x from -4. The sum of these distances has to be 6 or more. Hence, none of the choices is correct.

Choice (D)

undefined

Q6. DIRECTIONS for questions 4 to 6: Select the correct alternative from the given choices.

N is the smallest positive integer which when divided successively by 12, 18 and 17 leaves remainders of 9, 8 and 7 respectively. Find the remainder when $N^3 - N$ is divided by 14.

- a) 7
- b) 0
- c) 10
- d) 13

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	119
Avg. time spent on this question by all students	226
Difficulty Level	M
Avg. time spent on this question by students who got this question right	225
% of students who attempted this question	12.01
% of students who got the question right of those who attempted	56.57

[Video Solution](#)

Text Solution

The divisors and the corresponding remainders are listed as shown below

$$\begin{array}{ccc} 12 & 18 & 17 \\ + \downarrow & x + \downarrow & x \\ 9 & 8 & 7 \end{array}$$

$$N = k(12 \times 18 \times 17) + ((7x + 8)12 + 9) \\ = (12 \times 18 \times 17)k + 1617$$

For the smallest value of N, k = 0

Hence N = 1617

$$N^3 - N = N(N^2 - 1) = (N - 1)N(N + 1).$$

Hence it will be (1616)(1617)(1618)

1617 is divisible by 7 and $N^3 - N$ is even.

Hence when $N^3 - N$ is divided by 14, remainder is zero.

Choice (B)

undefined

Q7. DIRECTIONS for question 7: Type in your answer in the input box provided below the question.

A, B, C, D bought a car for Rs.3,60,000. A paid 50% of the amount paid by the others. B paid $33\frac{1}{3}\%$ of the amount paid by the others and C paid 25% of that paid by the others. How many rupees did D pay?

Rs.

You did not answer this question Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	172
Avg. time spent on this question by all students	273
Difficulty Level	E
Avg. time spent on this question by students who got this question right	264

Time spent / Accuracy Analysis

% of students who attempted this question	29.19
% of students who got the question right of those who attempted	51.94

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

Let the amounts paid by A, B, C, D be a, b, c, d respectively.

$$\therefore a + b + c + d = 3,60,000 \quad \text{--- (1)}$$

A paid 50% of the amount paid by others.

$$\therefore a = \frac{b+c+d}{2}$$

$$\Rightarrow 2a = b + c + d$$

$$\Rightarrow 3a = a + b + c + d$$

$$\therefore a = \frac{1}{3}(3,60,000) = 1,20,000$$

Similarly,

$$b = \frac{1}{3}(a+c+d) \Rightarrow 3b = a + c + d$$

$$\Rightarrow 4b = a + b + c + d$$

$$b = \frac{1}{4}(3,60,000) = 90,000$$

$$c = \frac{1}{4}(a+b+d)$$

$$4c = a + b + d$$

$$\Rightarrow 5c = a + b + c + d$$

$$c = \frac{1}{5}(3,60,000) = 72000$$

Amount paid by D =

$$d = 3,60,000 - (120000 + 90000 + 72000) = ₹78000.$$

Ans: (78000)

undefined

Q8. DIRECTIONS for questions 8 to 10: Select the correct alternative from the given choices.

Arun has a certain amount with him in only coins of denominations of Rs.1, Rs.5 and Rs.10. If the numbers of Rs.5 and Rs.1 coins are interchanged, then the total amount would increase by Rs.800. If the numbers of Rs.10 and Rs.5 coins are interchanged, then the total amount would increase by Rs.500. If the numbers of Rs.1 and Rs.10 coins are interchanged, what would be the increase in the total amount?

- a) **Rs.1300**
- b) **Rs.2600**
- c) **Rs.2700**
- d) **Rs.900**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	213
Avg. time spent on this question by all students	248
Difficulty Level	M
Avg. time spent on this question by students who got this question right	253
% of students who attempted this question	24.96

Time spent / Accuracy Analysis

% of students who got the question right of those who attempted **66.24**

[Video Solution](#)

[Text Solution](#)

Let the number of ₹1, ₹5 and ₹10 coins be a, b and c respectively. Total initial amount is $a + 5b + 10c$.

If the number of ₹5 and ₹1 coins are interchanged then the total amount is $5a + b + 10c$.

Given, $4(a - b) = 800$

$$\Rightarrow a - b = 200 \quad \text{---- (1)}$$

If the number of ₹10 and ₹5 coins are interchanged, then the total amount will be $a + 5c + 10b$.

Given, $5(b - c) = 500$

$$\Rightarrow b - c = 100 \quad \text{---- (2)}$$

If the number of Re. 1 and ₹10 coins are interchanged.

Then we need to find $9(a - c)$ ---- (3)

By adding (1) and (2), $a - c = 300$.

By substituting this in (3) we get $9(300) = 2700$

Choice (C)

undefined

Q9. DIRECTIONS for questions 8 to 10: Select the correct alternative from the given choices.

A room has six windows in a row, with alternate windows painted in blue and red colours. A man walks into the room and finds that at least two windows are closed. He also finds that all the windows that are closed are of the same colour. In how many ways could the windows have been closed?

- a) 10
- b) 16 Your answer is incorrect
- c) 8
- d) 15

[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 **137**

Difficulty Level **E**

Avg. time spent on this question by students who got this question right **136**

% of students who attempted this question **30.1**

% of students who got the question right of those who attempted **60.4**

[Video Solution](#)

[Text Solution](#)

The windows that are closed are either all blue or all red. In either case, 2 or all 3 are closed, which can happen in 3C_2 i.e., 3 ways and 3C_3 i.e., 1 way respectively. Similarly for the other coloured there would also be (3 + 1) i.e., 4 ways.

\therefore Total number of required ways = 4 + 4 i.e., 8.

Choice (C)

undefined

Q10. DIRECTIONS for questions 8 to 10: Select the correct alternative from the given choices.

Find the remainder when $(3264)_7$ is divided by $(8)_{10}$.

- a) 0
- b) 2
- c) 3
- d) 5

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	23
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	116
% of students who attempted this question	22.37
% of students who got the question right of those who attempted	55.29

[Video Solution](#)

[Text Solution](#)

Method 1:

$$(3264)_7 = [7^3(3) + 7^2(2) + 7(6) + 1(4)]_{10} = [(343)(3) + (49)(2) + 42 + 4]_{10} = (1173)_{10}$$

$(1173)_{10}$ when divided by $(8)_{10}$ will leave the same remainder as $(173)_{10}$ divided by $(8)_{10}$.
 \therefore Required remainder = 5

Method 2:

$$(3264)_7 = 3(7)^3 + 2(7)^2 + 6(7) + 4$$

Let $f(x) = 3x^3 + 2x^2 + 6x + 4$

The remainder of $f(x)$ being divided by $x - a$ is $f(a)$.

When $x = 7$ and $a = -1$, this remainder is the required remainder.

\therefore Required remainder = $3(-1)^3 + 2(-1)^2 + 6(-1) + 4 = -3 + 2 - 6 + 4 = -3$ which is equivalent to 5.

Method 3:

In the number system to the base 'x' any number divided by $(x + 1)$, the remainder

$$= \text{Rem} \left[\frac{\text{sum of oddplaced digits} - \text{sum of evenplaced digits}}{(x + 1)} \right]$$

$$\therefore \text{The required remainder is } \text{Rem} \left[\frac{(2+4)-(3+6)}{8} \right] = \text{Re} \left(\frac{-3}{8} \right) = 5 \quad \text{Choice (D)}$$

undefined

Q11. DIRECTIONS for question 11: Type in your answer in the input box provided below the question.

The L.C.M. of 12^{24} , 256^9 and X is 24^{24} . How many possible integral values can X assume?

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	19
Avg. time spent on this question by all students	145
Difficulty Level	M
Avg. time spent on this question by students who got this question right	171
% of students who attempted this question	15.82
% of students who got the question right of those who attempted	23.7

[Video Solution](#)

[Text Solution](#)

The factors of the 3 numbers, $a = 12^{12}$, $b = 256^9$ and X and their LCM are as shown below.⁰

a b X LCM

2^{48} 2^{72} 2^{72}
 3^{24} 3^{24}

Clearly there are only 2's and 3's in X. There could be any number of 2's from 0 to 72 and for each of these possibilities, there could be 0 to 24 3's. Thus, X can have 73(25) or 1825 values.

Ans: (1825)

undefined

Q12. DIRECTIONS for question 12: The question below is followed by two statements, A and B, giving certain data. You have to mark the correct answer from (A) to (D), depending on the sufficiency of the data given in the statements to answer the question.

Do eight men require more than 60 days to complete a piece of work, W?

A. Three men and five women complete twice as much work as W in 25 days.

B. 18 women complete four times as much work as W in 15 days.

a) if the question can be answered by using one of the statements alone but cannot be answered by using the other statement alone.

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.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	59
Avg. time spent on this question by all students	134
Difficulty Level	M
Avg. time spent on this question by students who got this question right	133
% of students who attempted this question	28.07
% of students who got the question right of those who attempted	72.66

[Video Solution](#)

[Text Solution](#)

Let the work w be 1 unit.
From A, $(3m + 5w)25 = 2$
 $\Rightarrow 75m + 125w = 2$
But we cannot say whether $480m < 1$ or not.
 \therefore A alone is not sufficient.
From B, $270w = 4$
Here, we don't have any information about men.
 \therefore B alone is not sufficient.
By combining both the statements,
 $75m + 125w = 2$
 $270w = 4$
 \therefore Both the statements together are sufficient to answer the question.

Choice (C)

undefined

Q13. DIRECTIONS for questions 13 to 15: Select the correct alternative from the given choices.

Train A travels from Secunderabad to Surat and train B travels from Surat to Secunderabad. Trains A and B leave Secunderabad and Surat on Monday at 1:00 a.m. and 6:00 a.m. respectively. The trains travel on parallel tracks and cross each other at 20 minutes past 10:00 p.m. on the same day. If both the trains reach their destinations simultaneously at time T, then T must be

- a) 5:05 p.m. on Tuesday.
- b) 5:10 p.m. on Tuesday.
- c) 4:40 p.m. on Tuesday.
- d) 5:00 p.m. on Tuesday.

You did not answer this question

[Show Correct Answer](#)

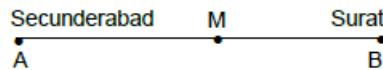
Time spent / Accuracy Analysis

Time taken by you to answer this question	140
Avg. time spent on this question by all students	220
Difficulty Level	M
Avg. time spent on this question by students who got this question right	268
% of students who attempted this question	10.46
% of students who got the question right of those who attempted	17.36

[Video Solution](#)

[Text Solution](#)

Let us denote the train travelling from Secunderabad to Surat by T_1 , and the other train by T_2 , and the places Secunderabad and Surat by A and B respectively.



Let the speed of T_1 and T_2 be v_1 and v_2 respectively and let the point where the trains cross each other be denoted by M.

From 1:00 a.m. to 10:20 p.m., the time elapsed = 1280 minutes

From 6:00 a.m. to 10:20 p.m., the time elapsed = 980 minutes

Now, $AM = v_1 \times 1280$, $MB = v_2 \times 980$

After meeting, both the trains take the same time to reach their destinations.

$$\text{So, } \frac{AM}{v_2} = \frac{BM}{v_1} \Rightarrow \frac{AM}{BM} = \frac{v_2}{v_1}$$

Using $AM = v_1 \times 1280$ and $BM = v_2 \times 980$

$$\therefore \frac{v_2}{v_1} = \frac{v_1 \times 1280}{v_2 \times 980} \text{ or, } \left(\frac{v_2}{v_1}\right)^2 = \left(\frac{8}{7}\right)^2 \text{ or, } \frac{v_2}{v_1} = \frac{8}{7}$$

Since after meeting, both the trains take the same time, the ratio of the distances will be the same as the ratio of the speeds or $AM = v_2 t$. $BM = v_1 t$

$$\frac{AM}{BM} = \frac{8}{7}$$

So the train T_1 travels $8/15^{\text{th}}$ of the total distance in 1280 minutes. Hence, it will travel

$$\text{the total distance in } \frac{1280 \times 15}{8} = 160 \times 15 \text{ minutes} = 2400 \text{ minutes} = 40 \text{ hours}$$

So it will reach its destination after 40 hours from 1:00 a.m. on Monday i.e., at 5:00 p.m. on Tuesday.

Alternative solution:

The time taken by the trains after crossing each other to reach their respective destinations

$$t = \sqrt{1280 \times 980} = 1120 \text{ minutes}$$

So the trains will reach their destinations after 1120 minutes from 10:20 p.m. on Monday, i.e., at 5:00 p.m. on Tuesday.

Choice (D)

undefined

Q14. DIRECTIONS for questions 13 to 15: Select the correct alternative from the given choices.

The perimeters of a circle, a regular hexagon and a rectangle are equal. If the areas of the circle, the regular hexagon and the rectangle are denoted by C, H and R, which of the following necessarily holds true?

- a) $C > H > R$
- b) $R > H > C$
- c) $H > R > C$
- 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	79
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	140
% of students who attempted this question	28.02
% of students who got the question right of those who attempted	49.99

[Video Solution](#)

[Text Solution](#)

Let p units be the perimeter of the circle, the hexagon and the rectangle.

$$\therefore C = \pi \left(\frac{p}{2\pi} \right)^2 = \frac{p^2}{4\pi}$$

$$H = 6 \times \frac{\sqrt{3}}{4} \left(\frac{p}{6} \right)^2 = \frac{\sqrt{3}p^2}{24} = \frac{p^2}{8\sqrt{3}}$$

As $8\sqrt{3} > 4\pi$, $C > H$

The area of the rectangle will be maximum possible, if it is a square.

$$\therefore R = \left(\frac{p}{4} \right)^2 = \frac{p^2}{16}$$

As $16 > 8\sqrt{3}$, $H > R$

$$\therefore C > H > R$$

Choice (A)

undefined

Q15. DIRECTIONS for questions 13 to 15: Select the correct alternative from the given choices.

The average mark of a class of n students is 64. After a group of eight new students, with an average mark of 73, joined the class, the new average of the entire class was a whole number. Find the number of students now in the class given that n lies between 25 and 60 (both exclusive).

- a) 44
- b) 32
- c) 36
- d) 48

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	236
Avg. time spent on this question by all students	236
Difficulty Level	E
Avg. time spent on this question by students who got this question right	240
% of students who attempted this question	22.77
% of students who got the question right of those who attempted	59.19

[Video Solution](#)

Text Solution

Each of the 8 new students is contributing an excess of 9 marks over the class average of 64 marks.

∴ Total excess is $9 \times 8 = 72$.

This should be distributed over $(n + 8)$ students to get the increase in average. (x) $\Rightarrow x$

$$= \frac{(9)(8)}{n+8}$$

For x to be a whole number, $9 \times 8 = 72$ must be divisible by the present number of students in the class, i.e., $(n + 8)$. By observing the answer choices, only 36 and 72, divide 72. As the initial number of students lies between 25 and 60, 72 can't be our answer. Hence answer is 36.

Choice (C)

undefined

Q16. DIRECTIONS for question 16: Type in your answer in the input box provided below the question.

Find the minimum number of coins required to pay the amounts of 67 paise, Rs. 1.03 and 83 paise to three persons A, B and C, respectively, using only coins of the denominations of 2 paise, 5 paise, 10 paise, 25 paise and 50 paise.

Your Answer:18 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	300
Avg. time spent on this question by all students	192
Difficulty Level	E
Avg. time spent on this question by students who got this question right	201
% of students who attempted this question	24.38
% of students who got the question right of those who attempted	25.26

Video Solution

Text Solution

The three amounts and the denominations in which they can be paid are tabulated below.

Number of coins	Denominations					Amount ↓
	2	5	10	25	50	
4	1	1	1		1	0.67
8	4		2	1	1	1.03
6	4			1	1	0.83

Thus, we need a minimum of 18 coins to pay the three amounts.

Ans: (18)

undefined

Q17. DIRECTIONS for questions 17 and 18: Select the correct alternative from the given choices.

There are six boxes, each containing brown and black socks. The number of socks in the six boxes is 11, 14, 17, 21, 22 and 27 respectively. One of these six boxes is removed and it was found that in the remaining five boxes together, the total number of brown socks is double the total number of black socks. How many socks are there in the box that is removed?

a) 11

b) **22**

c) **14**

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	4
Avg. time spent on this question by all students	121
Difficulty Level	E
Avg. time spent on this question by students who got this question right	148
% of students who attempted this question	24.77
% of students who got the question right of those who attempted	44.23

[Video Solution](#)

[**Text Solution**](#)

$11 + 14 + 17 + 21 + 22 + 27 = 112$. After removing one box, since number of brown socks is twice that of black, it means the total is divisible by 3 (because $x + 2x = 3x$); the only number which when subtracted from 112 gives a multiple of 3 is 22 (as $112 - 22 = 90$).
Choice (B)

undefined

Q18. DIRECTIONS for questions 17 and 18: Select the correct alternative from the given choices.

A manufacturer reduced the cost of production of an item by 20%, but left the selling price unchanged, as a result of which his profit (as a percentage of the cost of production) increased by 30 percentage points. What will be his profit percentage, if he reduces the cost of production by a further 25%?

a) **120%**

b) **100%**

c) **75%**

d) **200%**

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	314
Avg. time spent on this question by all students	193
Difficulty Level	E
Avg. time spent on this question by students who got this question right	202
% of students who attempted this question	20.23
% of students who got the question right of those who attempted	41

[Video Solution](#)

[**Text Solution**](#)

Let 100 be the initial cost price and P be the initial profit percentage. Hence, selling price

$$= 100 + P$$

The decreased cost price will be 80.

$$\text{Final profit percentage} = \frac{(P + 20)}{80} \times 100 = P + 30$$

$\Rightarrow P = 20$. If cost is decreased by a further 25%, CP = 60

$$\Rightarrow \text{final profit percentage} = \frac{(120 - 60)}{60} = 100\%$$

Choice (B)

undefined

Q19. DIRECTIONS for questions 19 and 20: Type in your answer in the input box provided below the question.

If $|2x - 5| \leq 9$ and $|4y - 7| \leq 21$, what is the maximum value of $|x| - |y|$?

Your Answer:3.5 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	167
Avg. time spent on this question by all students	118
Difficulty Level	E
Avg. time spent on this question by students who got this question right	122
% of students who attempted this question	25.42
% of students who got the question right of those who attempted	33.72

[Video Solution](#)

[Text Solution](#)

For $|x| - |y|$ to be maximum, $|x|$ must be maximum and $|y|$ minimum.

For $|x|$ to be maximum given $|2x - 5| \leq 9$, $-9 \leq (2x - 5) \leq 9$

i.e., $-7 \leq x \leq 7 \Rightarrow |x| \leq 7$

and $|y|$ can be zero, which still satisfies $|4y - 7| \leq 21$.

(i.e., $| -7 | \leq 21$)

\therefore maximum value of $|x| - |y| = 7 - 0 = 7$

Ans: (7)

undefined

Q20. DIRECTIONS for questions 19 and 20: Type in your answer in the input box provided below the question.

A road AB is 200 m long. Five poles are placed on the road starting from A, towards B, in a straight line, with the distance between any two adjacent poles being 4 m. Find the minimum distance (in m) to be travelled by a person to transport all the poles to B starting from A, carrying only one pole at a time?

Your Answer:80 □ Your answer is incorrect

Show Correct Answer

Time spent / Accuracy Analysis

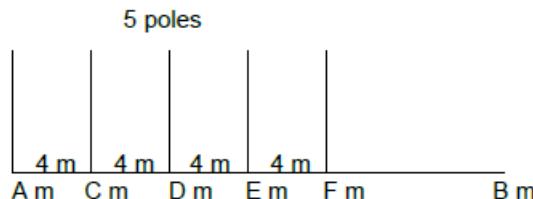
Time taken by you to answer this question	235
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Time spent / Accuracy Analysis

Avg. time spent on this question by all students	170
Difficulty Level	E
Avg. time spent on this question by students who got this question right	216
% of students who attempted this question	21.09
% of students who got the question right of those who attempted	16.62

[Video Solution](#)

[Text Solution](#)



$$\begin{aligned}\text{Total distance to be travelled} \\ &= AB + BC + CB + BD + DB + BE + EB + BF + FB \\ &= AB + 2BC + 2BD + 2BE + 2BF\end{aligned}$$

$$\begin{aligned}&= 200 + 2(196 + \underbrace{192 + 188 + 184}) \\ &= 200 + 2(380 + 380) \\ &= 200 + 2(760) = 1720.\end{aligned}$$

Ans: (1720)

undefined

Q21. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

In a geometric progression, if the sum of the fourth, fifth and sixth terms is eight times the sum of the first three terms, find the common ratio.

a) 3

b)

-3

c)

-2

d) 2 Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	113
Avg. time spent on this question by all students	105
Difficulty Level	VE
Avg. time spent on this question by students who got this question right	105
% of students who attempted this question	26.22

Time spent / Accuracy Analysis

% of students who got the question right of those who attempted **83.84**

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned} \text{Given that } ar^3 + ar^4 + ar^5 &= 8(a + ar + ar^2) \\ \Rightarrow r^3 + r^4 + r^5 &= 8(1 + r + r^2) \\ r^3(1 + r + r^2) &= 8(1 + r + r^2) \\ \Rightarrow r^3 = 8 &\Rightarrow r = 2. \end{aligned}$$

Choice (D)

undefined

Q22. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

In a trapezium PQRS, $\overline{PQ} \parallel \overline{RS}$ and diagonals \overline{QS} and \overline{PR} intersect at O. If the area of the triangle QOR is 90 sq.units and $\frac{OP}{PR} = \frac{2}{5}$, find the area (in sq.units) of the trapezium.

- a) 325
- b) 375
- c) 360
- d) 420

You did not answer this question

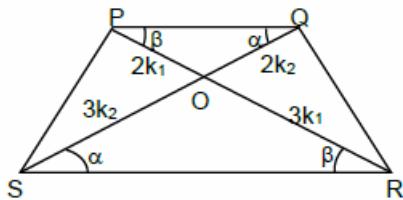
[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	46
Avg. time spent on this question by all students	143
Difficulty Level	M
Avg. time spent on this question by students who got this question right	151
% of students who attempted this question	6.87
% of students who got the question right of those who attempted	38.2

[Video Solution](#)

[Text Solution](#)



$$OP = 2k_1, OQ = 2k_2 \\ OR = 3k_1, OS = 3k_2$$

Δ les OPQ and ORS are similar triangles

$$\therefore \frac{OP}{OR} = \frac{OQ}{OS}$$

$$\text{Given } \frac{OP}{PR} = \frac{2}{5} \Rightarrow \frac{OP}{OR} = \frac{2}{3} = \frac{OQ}{OS}$$

Consider triangle PQR, which contains triangle OPQ and OQR. Ratio of areas = Ratio of bases.

$$\Rightarrow \frac{\text{Area of OPQ}}{\text{Area of OQR}} = \frac{OP}{QR} = \frac{2}{3}$$

$$\Rightarrow \text{Area of OPQ} = \frac{2}{3} \times 90 = 60$$

$$\text{Similarly, } \frac{\text{Area of OPQ}}{\text{Area of OPS}} = \frac{2}{3}$$

$$\Rightarrow \text{Area of OPS} = \frac{3}{2} \times 60 = 90$$

$$\frac{\text{Area of OPQ}}{\text{Area of OPS}} = \frac{3}{2} = \text{Area of ORS} = \frac{3}{2} \times 90 = 135$$

$$\therefore \text{Area of trapezium} = 90 + 60 + 90 + 135 = 375 \text{ sq. units}$$

Choice (B)

undefined

Q23. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

On 23rd January, 2006, when a clock showed 8:03 a.m., it was 21 minutes behind the correct time. On the last day of that month, at 8:24 p.m., it was showing 9:11 p.m. on that day. When was the clock 13 minutes ahead of the correct time?

a) 2:24 p.m. on the 27th

b) 2:03 p.m. on the 27th

c) 8:24 a.m. on the 28th

d) 8:03 a.m. on the 28th

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	172
Difficulty Level	M
Avg. time spent on this question by students who got this question right	204
% of students who attempted this question	6.57
% of students who got the question right of those who attempted	35.25

[Video Solution](#)

[Text Solution](#)

On 23.1.06 when the clock showed 8:03 AM, it was 21 minutes behind the correct time.
Hence, the correct time was 8:03 AM + 21 min = 8:24 AM (1)

The second observation was made on 31.1.2006 at 8:24 PM (The correct time) (2)

Duration between the two observations is = $8\frac{1}{2}$ days = 204 hrs (3).

On 23.1.06, the clock was lagging and on 31.1.06 the clock was leading.
⇒ the clock is gaining time.

Amount of gain in $8\frac{1}{2}$ days (= 204 hrs) is

[9:11 PM – 8:24 PM] – (-21 min) = 49 + 21 = 68 minutes (4)

If the clock has to show 13 minutes ahead, by that time, the clock should have gained
 $13 - (-21) = 34$ minutes (5).

From (4) and (5), it is clear that, the clock should have run for $\frac{34}{68} (204) = 102$ hours =

4 days + 6 hrs.

Hence, the time when the clock was 13 minutes ahead of right time is :
23.1.06, 8:24 AM + 4 days + 6 hrs = 27.1.06, 2:24 PM.

The time is 2:24 PM and the date is 27.1.06.

Choice (A)

undefined

Q24. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

In a plane, there are ten points, exactly three of which are collinear. No other set of three points are collinear. Find the number of distinct straight lines which can be formed by joining these ten points.

a) 40

b) 36

c) 43 Your answer is correct

d) 41

Time spent / Accuracy Analysis

Time taken by you to answer this question	37
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Avg. time spent on this question by all students	92
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Time spent / Accuracy Analysis

Difficulty Level	E
Avg. time spent on this question by students who got this question right	94
% of students who attempted this question	18.92
% of students who got the question right of those who attempted	71.24

[Video Solution](#)

[Text Solution](#)

Number of straight lines which can be formed using the points other than the collinear

$$\text{points} = {}^7C_2 = \frac{7(6)}{2} = 21$$

Number of straight lines which can be formed using one of the collinear points and one
of the other points

$$= {}^3C_1 \cdot {}^7C_1 = 3(7) = 21$$

Also one line is formed by the collinear points.

$$\therefore \text{Total number of straight lines which can be formed} \\ = 21 + 21 + 1 = 43$$

Choice (C)

undefined

Q25. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

$A_1, A_2, A_3, \dots, A_n$ represents a sequence of numbers satisfying $A_{N+1} = A_N + A_{N+2}$. Find the sum of the first 3002 terms of this sequence, given that $A_1 = 65$ and $A_2 = -13$.

- a) 52
- b) 78
- c) 39
- d) 91

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	165
Difficulty Level	M
Avg. time spent on this question by students who got this question right	180
% of students who attempted this question	8.23
% of students who got the question right of those who attempted	64.68

[Video Solution](#)

[Text Solution](#)

$$\begin{aligned}
 A_3 &= A_2 - A_1 \\
 A_4 &= A_3 - A_2 = -A_1 \\
 A_5 &= A_4 - A_3 = -A_2 \\
 A_6 &= A_1 - A_2 = -A_3 \\
 A_7 &= A_1 \text{ and } A_8 = A_2. \text{ We see that from } A_7 \text{ onwards the same values occur again.} \\
 \text{Also the sum of the first 6 terms is 0. Therefore, the sum of every set of 6 successive terms in this sequence will be 0.} \\
 \therefore \text{Sum of the first 3002 terms of this sequence} \\
 &= A_1 + A_2 = 52.
 \end{aligned}$$

Choice (A)

undefined

Q26. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

There is an overhead tank, T, which has three pipes P, Q and R connected at its bottom to let out the water available in it into three small tanks A, B and C respectively. The volumes of A, B and C are 40%, 45% and 50% respectively of the volume of T. A pipe S is connected to T, and it can fill T (when T is empty and the pipes P, Q and R closed) in 60 minutes. Also, the capacities of the pipes P, Q and R are such that they can fill A, B and C in 24, 30 and 40 minutes respectively, provided water is available in T. If at 2:00 p.m., all the tanks are empty and the pipes P, Q, R and S are all opened simultaneously, then what is earliest possible time at which all of A, B and C can be filled?

- a) 3:00 p.m.
- b) 3:12 p.m.
- c) 3:24 p.m.
- d) 3:21 p.m.

You did not answer this question

Show Correct Answer

Time spent / Accuracy Analysis

Time taken by you to answer this question	3
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	188
% of students who attempted this question	3.66
% of students who got the question right of those who attempted	28.85

[Video Solution](#)

[Text Solution](#)

Let the volume of T be 1 unit.
 So, the volumes of A, B and C are 0.4, 0.45 and 0.5 units respectively.
 Since, the volume of A is 40% of that of T and A is filled by P in exactly 40%
 $\left(\text{i.e., } \frac{24}{60} \times 100\% \right)$ of the time taken to fill T, the rate of flow into A (i.e., the leakage out
 of T into A) is exactly equal to the rate of flow into T. Hence, as there are two more
 outlets (into B and C), the total outflow from T will be more than the inflow into T. Hence,
 T remains almost empty until all three of A, B and C are filled completely.
 So, the task on hand is to fill A, B and C through T in the minimum possible time. The
 total volume of be filled is $0.4 + 0.45 + 0.5$ i.e., 1.35. Since, it takes T 60 minutes to get
 filled, 1.35 times T can be filled in 1.35×60 i.e., 81 minutes, i.e., 2:00 p.m. + 81 minutes
 $= 3:21$ p.m. This is the least time in which all of A, B and C can be filled.

Choice (D)

undefined

Q27. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

Given $N = 56! + 55! + 54! + \dots + 4! + 3! + 2! + 1!$, what is the remainder when N is divided by 56?

- a) 5
- b) 1
- c) 33 Your answer is correct
- d) 55

Time spent / Accuracy Analysis

Time taken by you to answer this question	151
Avg. time spent on this question by all students	122
Difficulty Level	E
Avg. time spent on this question by students who got this question right	148
% of students who attempted this question	18.32
% of students who got the question right of those who attempted	53.98

[Video Solution](#)

[Text Solution](#)

The factors of 56 are 7 and 2^3 . All factorials of N more than 6 (starting from 7) are divisible by 2^3 and 7. So, the part that contributes to the remainder is
 $6! + 5! + 4! + 3! + 2! + 1!$
 $= 720 + 120 + 24 + 6 + 2 + 1 = 873$

$$\therefore \text{Remainder of } \frac{N}{56} = \text{Remainder of } \frac{873}{56} = 33$$

Choice (C)

undefined

Q28. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

If the sum of the first 13 terms of an arithmetic progression equals the sum of its first 27 terms, find the sum of its first 40 terms.

a) 0

b)

-1

c) 1

d) Cannot be determined Your answer is incorrect

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	125
Difficulty Level	E
Avg. time spent on this question by students who got this question right	133
% of students who attempted this question	22.44
% of students who got the question right of those who attempted	46.41

[Video Solution](#)

[Text Solution](#)

Let the first term and the common difference be a and d respectively.

$$\frac{13}{2} [2a + 12d] = \frac{27}{2} [2a + 26d]$$

$$14a + (13)(21)d = 0$$

$$2a = -39d$$

$$\text{Sum of its first 40 terms} = \frac{40}{2} [2a + 39d] = 0$$

Choice (A)

undefined

Q29. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

A person when travelling at $\frac{6}{7}$ th of his usual speed takes 15 minutes more for a certain journey than what he would take when he travels at $\frac{4}{3}$ rd of his usual speed. What is the time taken by the person for a journey which is one and half times as long as the original one, when he travels at his usual speed?

a) 30 minutes

b) 36 minutes

c) 48 minutes

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	61
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	201
% of students who attempted this question	13.37
% of students who got the question right of those who attempted	72.67

[Video Solution](#)

[Text Solution](#)

Let the persons actual time and speed be t and s respectively.

Time taken by him when he was travelling at $\frac{6}{7}s$ is $\frac{7}{6}t$

Time taken by him when he was travelling at $\frac{4}{3}s$ is $\frac{3}{4}t$

Given, $\frac{7}{6}t - \frac{3}{4}t = 15$ minutes

$$\frac{5}{12}t = 15 \text{ minutes}$$

$$t = 36 \text{ minutes}$$

But since the final journey is one and half times the original one, $t \times 1.5 = 54$ minutes.
Choice (D)

undefined

Q30. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

In a class, 60% of the students are boys, 20% of the boys are from middle class families. If 30% of the students in the class are from middle class families, find the fraction of girls who are not from middle class families?

a) $\frac{7}{10}$

b) $\frac{8}{15}$

c) $\frac{9}{20}$

d) $\frac{11}{20}$ Your answer is correct

Time spent / Accuracy Analysis

Time taken by you to answer this question	122
Avg. time spent on this question by all students	123
Difficulty Level	VE

Time spent / Accuracy Analysis

Avg. time spent on this question by students who got this question right 123

% of students who attempted this question 29.61

% of students who got the question right of those who attempted 74.09

[Video Solution](#)

[Text Solution](#)

The data and calculations are tabulated below.

	Boys	Girls	
Middle	12	18	30
Non-middle		22	
Total	60	40	100

The fraction of girls who are not from middle class families is $\frac{40-18}{40} = \frac{22}{40} = \frac{11}{20}$
Choice (D)

undefined

Q31. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

If $x = \frac{1}{3 + \frac{1}{2 + \frac{1}{3 + \frac{1}{2 + \dots}}}}$, find x.

a) $\frac{-3 + \sqrt{15}}{2}$

b) $\frac{-3 - \sqrt{15}}{3}$

c) $\frac{-3 - \sqrt{15}}{2}$

d) $\frac{-3 + \sqrt{15}}{3}$

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question 2

Avg. time spent on this question by all students 153

Difficulty Level E

Avg. time spent on this question by students who got this question right 173

% of students who attempted this question 12.53

% of students who got the question right of those who attempted 66.83

[Video Solution](#)

[Text Solution](#)

$$x = \frac{1}{3 + \frac{1}{2+x}} = \frac{2+x}{7+3x} \Rightarrow 3x^2 + 6x - 2 = 0$$

$$x = \frac{-6 \pm \sqrt{60}}{2(3)} = \frac{-3 \pm \sqrt{15}}{3}$$

But x is positive.

$$\therefore x = \frac{-3 + \sqrt{15}}{3}$$

Choice (D)

undefined

Q32. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

Find the sum of the digits of the least whole number N ($N > 2$), which satisfies the condition that the sum of the first N whole numbers is a perfect square.

- a) 9
- b) 6
- c) 7
- d) 8

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question	10
Avg. time spent on this question by all students	94
Difficulty Level	M
Avg. time spent on this question by students who got this question right	96
% of students who attempted this question	11.15
% of students who got the question right of those who attempted	38.61

[Video Solution](#)

[Text Solution](#)

We know that $0 + 1 + 2 + \dots + 8 = 36$, which is a perfect square. Hence the sum of the first nine whole numbers is a perfect square. Hence $N = 9$.
 Sum of digits of 9 = 9 itself.

Alternative method:

$$\text{Sum of the first } N \text{ whole numbers} = \frac{(N-1)N}{2}$$

Let $\frac{(N-1)N}{2} = K^2$ (say), where K is a natural number $K \geq 1 \Rightarrow N^2 - N - 2K^2 = 0$

$$\Rightarrow N = \frac{1 \pm \sqrt{1+8K^2}}{2} \text{ is a natural number}$$

$\Rightarrow \sqrt{1+8K^2}$ is an odd natural number

$\Rightarrow (1+8K^2)$ is an odd natural number

$\Rightarrow K = 1, 6, \dots$

If $K = 1$, $N = 1$.

But given $N > 1$.

$$\text{If } K = 6, N = \frac{1+\sqrt{289}}{2} = 9$$

Choice (A)

undefined

Q33. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

A school needs funds for a new building. 80% of the people that the school approached for funds gave an average contribution of Rs.600 each, thereby making up 75% of the total amount needed. To raise the rest of the total amount needed, what should the average contribution from the remaining people the school has approached for donations?

- a) **Rs.850**
- b) **Rs.800**
- c) **Rs.650**
- d) **Rs.400**

You did not answer this question

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	133
Difficulty Level	E

Time spent / Accuracy Analysis

Avg. time spent on this question by students who got this question right **135**

% of students who attempted this question **20.47**

% of students who got the question right of those who attempted **84.17**

[Video Solution](#)

[Text Solution](#)

Let the total number of people the school has asked be 100.

Amount collected from 80% of people

$$= 80 \times 600 = ₹48,000$$

This is 75% of the total contribution.

∴ Remaining 25% of the total contribution = ₹16,000

∴ 16,000 is to be donated by 20% i.e. 20 people

$$\therefore \text{Average per person} = \frac{16000}{20} = ₹800$$

Choice (B)

undefined

Q34. DIRECTIONS for questions 21 to 34: Select the correct alternative from the given choices.

If $\log_q p = \frac{x}{\log_q r} = \frac{y}{\log_r p} = xy$, find the sum of all the possible values that the product xy can assume.

- a) 1.
- b) -1.
- c) $-\frac{1}{2}$.
- d) 0.

You did not answer this question

[Show Correct Answer](#)

Time spent / Accuracy Analysis

Time taken by you to answer this question **4**

Avg. time spent on this question by all students **159**

Difficulty Level **M**

Avg. time spent on this question by students who got this question right **154**

% of students who attempted this question **6.08**

% of students who got the question right of those who attempted **29**

[Video Solution](#)

[Text Solution](#)

$$\frac{x}{\log_q r} = x \log_q q = xy$$

$$\Rightarrow \log_q q = y$$

$$r^y = q$$

$$\frac{y}{\log_r p} = y \log_p r = xy$$

$$\Rightarrow \log_p r = x$$

$$p^x = r$$

$$p^{xy} = r^y = q$$

$$\log_q p = xy$$

$$q^{xy} = p \Rightarrow (q^{xy})^{xy} = p^{xy} = q$$

$$q^{(xy)^2} = q$$

$$\therefore xy = \pm 1$$

\therefore Sum of all possible values of $xy = 0$.

Choice (D)