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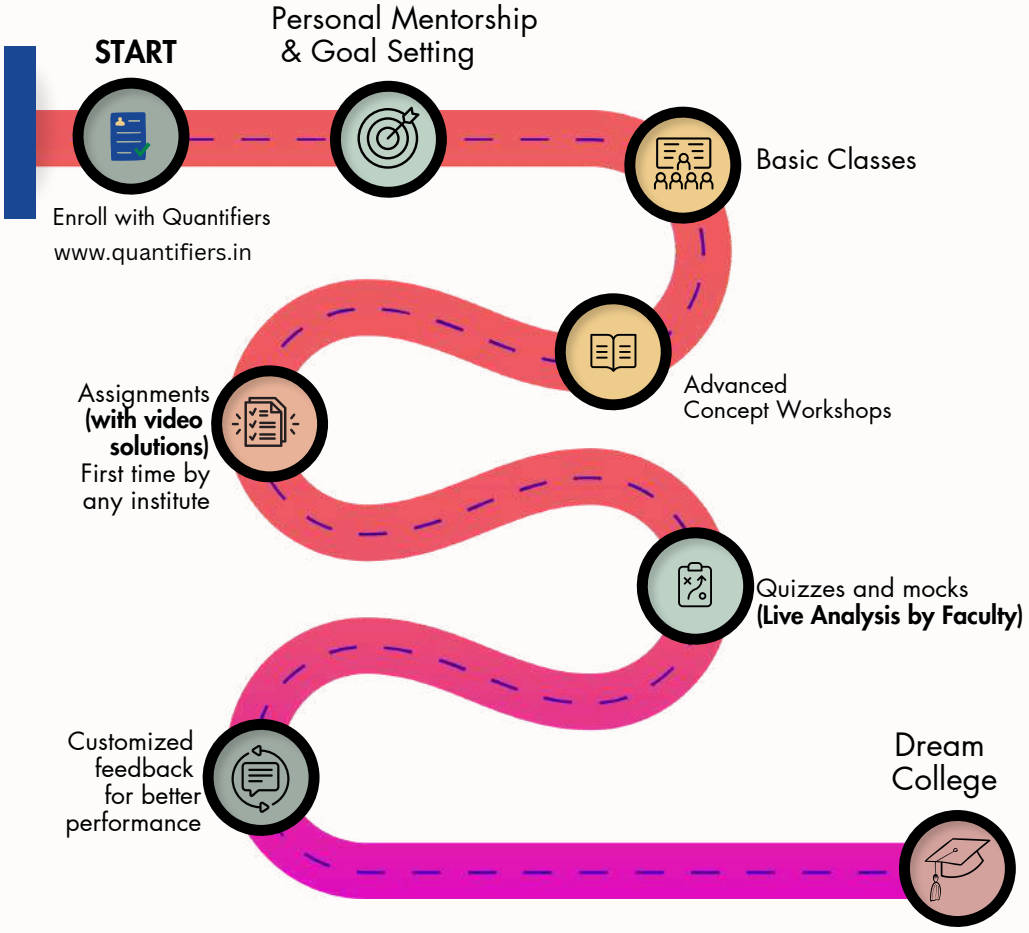

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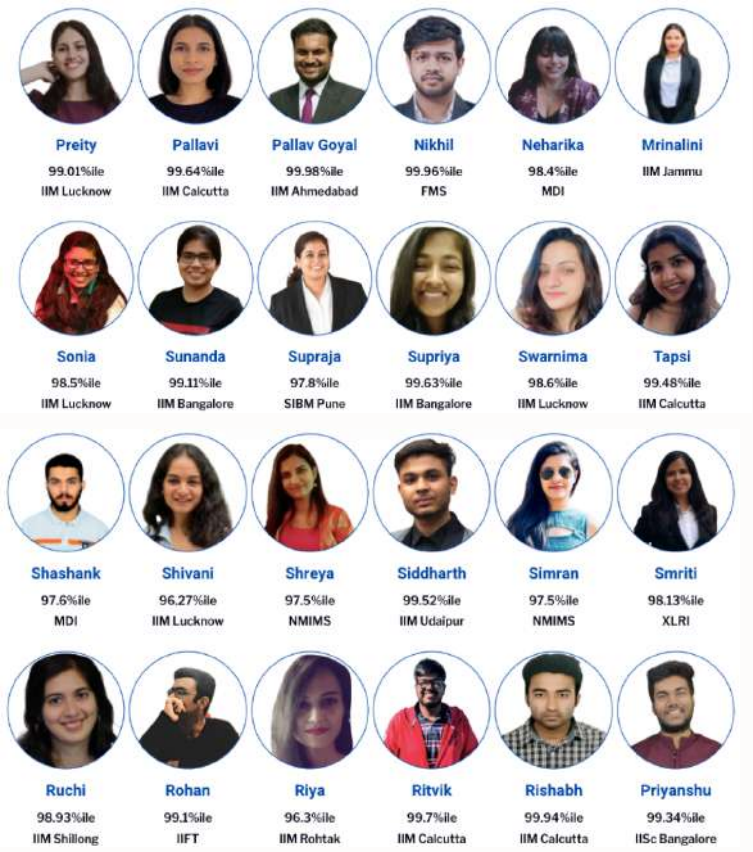


CAT 2023 Slot - 2 VARC

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

The Positivists, anxious to stake out their claim for history as a science, contributed the weight of their influence to the cult of facts. First ascertain the facts, said the positivists, then draw your conclusions from them…..This is what may [be] called the common-sense view of history. History consists of a corpus of ascertained facts. The facts are available to the historian in documents, inscriptions, and so on…[Sir George Clark] contrasted the "hard core of facts" in history with the surrounding pulp of disputable interpretation forgetting perhaps that the pulpy part of the fruit is more rewarding than the hard core.….It recalls the favourite dictum of the great liberal journalist C. P. Scott: "Facts are sacred, opinion is free.". . .

What is a historical fact?..... According to the common-sense view, there are certain basic facts which are the same for all historians and which form, so to speak, the backbone of history—the fact, for example, that the Battle of Hastings was fought in 1066. But this view calls for two observations. In the first place, it is not with facts like these that the historian is primarily concerned. It is no doubt important to know that the great battle was fought in 1066 and not in 1065 or 1067, and that it was fought at Hastings and not at Eastbourne or Brighton. The historian must not get these things wrong. But [to] praise a historian for his accuracy is like praising an architect for using well-seasoned timber or properly mixed concrete in his building. It is a necessary condition of his work, but not his essential function. It is precisely for matters of this kind that the historian is entitled to rely on what have been called the "auxiliary sciences" of history—archaeology, epigraphy, numismatics, chronology, and so forth….

The second observation is that the necessity to establish these basic facts rests not on any quality in the facts themselves, but on an apriori decision of the historian. In spite of C. P. Scott's motto, every journalist knows today that the most effective way to influence opinion is by the selection and arrangement of the appropriate facts. It used to be said that facts speak for themselves. This is, of course, untrue. The facts speak only when the historian calls on them: it is he who decides to which facts to give the floor, and in what order or context. . . . The only reason why we are interested to know that the battle was fought at Hastings in 1066 is that historians regard it as a major historical event…….. Professor Talcott Parsons once called [science] "a selective system of cognitive orientations to reality." It might perhaps have been put more simply. But history is, among other things, that. The historian is necessarily selective. The belief in a hard core of historical facts existing objectively and independently of the interpretation of the historian is a preposterous fallacy, but one which it is very hard to eradicate.

Question No. : 1

According to this passage, which one of the following statements best describes the significance of archaeology for historians?

A) Archaeology helps historians to interpret historical facts.
B) Archaeology helps historians to ascertain factual accuracy.
C) Archaeology helps historians to carry out their primary duty.
D) Archaeology helps historians to locate the oldest civilisations in history

Question No. : 2
All of the following, if true, can weaken the passage's claim that facts do not speak for themselves, EXCEPT:
A) the truth value of a fact is independent of the historian who expresses it.
B) facts, like truth, can be relative: what is fact for person X may not be so for person Y.
C) a fact, by its very nature, is objective and universal, irrespective of the context in which it is placed.
D) the order in which a series of facts is presented does not have any bearing on the production of meaning.

Question No. : 3
If the author of the passage were to write a book on the Battle of Hastings along the lines of his/her own reasoning, the focus of the historical account would be on:
A) providing a nuanced interpretation by relying on the auxiliary sciences.
B) producing a detailed timeline of the various events that led to the Battle.
C) exploring the socio-political and economic factors that led to the Battle.
D) deriving historical facts from the relevant documents and inscriptions.

Question No. : 4
All of the following describe the "common-sense view" of history, EXCEPT:
A) history can be objective like the sciences if it is derived from historical facts.
B) real history can be found in ancient engravings and archival documents.
C) history is like science: a selective system of cognitive orientations to reality.
D) only the positivist methods can lead to credible historical knowledge.

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

Over the past four centuries liberalism has been so successful that it has driven all its opponents off the battlefield. Now it is disintegrating, destroyed by a mix of hubris and internal contradictions, according to Patrick Deneen, a professor of politics at the University of Notre Dame…..Equality of opportunity has produced a new meritocratic aristocracy that has all the aloofness of the old aristocracy with none of its sense of noblesse oblige. Democracy has degenerated into a theatre of the absurd. And technological advances are reducing ever more areas of work into meaningless drudgery. "The gap between liberalism's claims about itself and the lived reality of the citizenry" is now so wide that "the lie can no longer be accepted," Mr Deneen writes. What better proof of this than the vision of 1,000 private planes whisking their occupants to Davos to discuss the question of "creating a shared future in a fragmented world"? . . .
Deneen does an impressive job of capturing the current mood of disillusionment, echoing left-wing complaints about rampant commercialism, right-wing complaints about narcissistic and bullying students, and general worries about atomisation and selfishness. But when he concludes that all this adds up to a failure of liberalism, is his argument convincing?....He argues that the essence of liberalism lies in freeing individuals from constraints. In fact, liberalism contains a wide range of intellectual traditions which provide different answers to the question of how to trade off the relative claims of rights and responsibilities, individual

expression and social ties….. liberals experimented with a range of ideas from devolving power from the centre to creating national education systems.
Mr Deneen's fixation on the essence of liberalism leads to the second big problem of his book: his failure to recognise liberalism's ability to reform itself and address its internal problems. The late 19th century saw America suffering from many of the problems that are reappearing today, including the creation of a business aristocracy, the rise of vast companies, the corruption of politics and the sense that society was dividing into winners and losers. But a wide variety of reformers, working within the liberal tradition, tackled these problems head on. Theodore Roosevelt took on the trusts. Progressives cleaned up government corruption. University reformers modernised academic syllabuses and built ladders of opportunity. Rather than dying, liberalism reformed itself.
Mr Deneen is right to point out that the record of liberalism in recent years has been dismal. He is also right to assert that the world has much to learn from the premodern notions of liberty as self-mastery and self-denial. The biggest enemy of liberalism is not so much atomisation but old-fashioned greed, as members of the Davos elite pile their plates ever higher with perks and share options. But he is wrong to argue that the only way for people to liberate themselves from the contradictions of liberalism is "liberation from liberalism itself". The best way to read "Why Liberalism Failed" is not as a funeral oration but as a call to action: up your game, or else.
The author of the passage faults Deneen's conclusions for all of the following reasons, EXCEPT:

Question No. : 5
A) its failure to note historical instances in which the process of declining liberalism has managed to reverse itself.
B) its extreme pessimism about the future of liberalism today and predictions of an ultimate decline.
C) its repeated harking back to premodern notions of liberty.
D) its very narrow definition of liberalism limited to individual freedoms.

Question No. : 6
The author of the passage refers to "the Davos elite" to illustrate his views on:
A) the unlikelihood of a return to the liberalism of the past as long as the rich continue to benefit from the decline in liberal values.
B) the way the debate around liberalism has been captured by the rich who have managed to insulate themselves from economic hardships.
C) the fact that the rise in liberalism had led to a greater interest in shared futures from unlikely social classes.
D) the hypocrisy of the liberal rich, who profess to subscribe to liberal values while cornering most of the wealth

Question No. : 7
All of the following statements are evidence of the decline of liberalism today, EXCEPT:
A) "And technological advances are reducing ever more areas of work into meaningless drudgery."
B) "'The gap between liberalism's claims about itself and the lived reality of the citizenry' is now so wide that 'the lie can no longer be accepted,'. "

C) “Democracy has degenerated into a theatre of the absurd.”
D) “... the creation of a business aristocracy, the rise of vast companies”

Question No. : 8
The author of the passage is likely to disagree with all of the following statements, EXCEPT:
A) the essence of liberalism lies in greater individual self-expression and freedoms.
B) claims about liberalism’s disintegration are exaggerated and misunderstand its core features.
C) if we accept that liberalism is a dying ideal, we must work to find a viable substitute.
D) liberalism was the dominant ideal in the past century, but it had to reform itself to remain so.

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

The Second Hand September campaign, led by Oxfam . . . seeks to encourage shopping at local organisations and charities as alternatives to fast fashion brands such as Primark and Boohoo in the name of saving our planet. As innocent as mindless scrolling through online shops may seem, such consumers are unintentionally—or perhaps even knowingly— contributing to an industry that uses more energy than aviation. . . .
Brits buy more garments than any other country in Europe, so it comes as no shock that many of those clothes end up in UK landfills each year: 300,000 tonnes of them, to be exact. This waste of clothing is destructive to our planet, releasing greenhouse gasses as clothes are burnt as well as bleeding toxins and dyes into the surrounding soil and water. As ecologist Chelsea Rochman bluntly put it, “The mismanagement of our waste has even come back to haunt us on our dinner plate.”
It’s not surprising, then, that people are scrambling for a solution, the most common of which is second-hand shopping. Retailers selling consigned clothing are currently expanding at a rapid rate …..If everyone bought just one used item in a year, it would save 449 million lbs of waste, equivalent to the weight of 1 million Polar bears. “Thrifting” has increasingly become a trendy practice. London is home to many second-hand, or more commonly coined ‘vintage’, shops across the city from Bayswater to Brixton.
So you’re cool and you care about the planet; you’ve killed two birds with one stone. But do people simply purchase a second-hand item, flash it on Instagram with #vintage and call it a day without considering whether what they are doing is actually effective?
According to a study commissioned by Patagonia, for instance, older clothes shed more microfibres. These can end up in our rivers and seas after just one wash due to the worn material, thus contributing to microfibre pollution. To break it down, the amount of microfibres released by laundering 100,000 fleece jackets is equivalent to as many as 11,900 plastic grocery bags, and up to 40 per cent of that ends up in our oceans. So where does this leave second-hand consumers? [They would be well advised to buy] high-quality items that shed less and last longer [as this] combats both microfibre pollution and excess garments ending up in landfills. . . .
Luxury brands would rather not circulate their latest season stock around the globe to be sold at a cheaper price, which is why companies like ThredUP, a US fashion resale marketplace, have not yet caught on in the UK. There will always be a market for consignment but there is also a whole generation of people who have been taught that only buying new products is the norm; second-hand luxury goods are not in their psyche. Ben Whitaker, director at Liquidation

Firm B-Stock, told Prospect that unless recycling becomes cost-effective and filters into mass production, with the right technology to partner it, "high-end retailers would rather put brand before sustainability."

Question No. : 9
Based on the passage, we can infer that the opposite of fast fashion, 'slow fashion', would most likely refer to clothes that:
A) do not shed microfibres.
B) do not bleed toxins and dyes.
C) are sold by genuine vintage stores.
D) are of high quality and long lasting.

Question No. : 10
The act of "thrifting", as described in the passage, can be considered ironic because it:
A) offers luxury clothing at cut-rate prices.
B) is not cost-effective for retailers.
C) is an anti-consumerist attitude.
D) has created environmental problems.

Question No. : 11
The central idea of the passage would be undermined if:
A) second-hand stores sold only high-quality clothes.
B) clothes were not thrown and burnt in landfills.
C) Primark and Boohoo recycled their clothes for vintage stores.
D) customers bought all their clothes online.

Question No. : 12
According to the author, companies like ThredUP have not caught on in the UK for all of the following reasons EXCEPT that:
A) luxury brands want to maintain their brand image.
B) the British don't buy second-hand clothing.
C) recycling is currently not financially attractive for luxury brands.
D) luxury brands do not like their product to be devalued.

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

Umberto Eco, an Italian writer, was right when he said the language of Europe is translation. Netflix and other deep-pocketed global firms speak it well. Just as the EU employs a small army of translators and interpreters to turn intricate laws or impassioned speeches of Romanian MEPs into the EU's 24 official languages, so do the likes of Netflix. It now offers dubbing in 34 languages and subtitling in a few more. . . .

The economics of European productions are more appealing, too. American audiences are more willing than before to give dubbed or subtitled viewing a chance. This means shows such as "Lupin", a French crime caper on Netflix, can become global hits. In 2015, about 75% of Netflix's original content was American; now the figure is half, according to Ampere, a media-

analysis company. Netflix has about 100 productions under way in Europe, which is more than big public broadcasters in France or Germany. . . .

Not everything works across borders. Comedy sometimes struggles. Whodunits and bloodthirsty maelstroms between arch Romans and uppity tribesmen have a more universal appeal. Some do it better than others. Barbarians aside, German television is not always built for export, says one executive, being polite. A bigger problem is that national broadcasters still dominate. Streaming services, such as Netflix or Disney+, account for about a third of all viewing hours, even in markets where they are well-established. Europe is an ageing continent. The generation of teens staring at phones is outnumbered by their elders who prefer to gawp at the box.

In Brussels and national capitals, the prospect of Netflix as a cultural hegemon is seen as a threat. "Cultural sovereignty" is the watchword of European executives worried that the Americans will eat their lunch. To be fair, Netflix content sometimes seems stuck in an uncanny valley somewhere in the mid-Atlantic, with local quirks stripped out. Netflix originals tend to have fewer specific cultural references than shows produced by domestic rivals, according to Enders, a market analyst. The company used to have an imperial model of commissioning, with executives in Los Angeles cooking up ideas French people might like. Now Netflix has offices across Europe. But ultimately the big decisions rest with American executives. This makes European politicians nervous.

They should not be. An irony of European integration is that it is often American companies that facilitate it. Google Translate makes European newspapers comprehensible, even if a little clunky, for the continent's non-polyglots. American social-media companies make it easier for Europeans to talk politics across borders. (That they do not always like to hear what they say about each other is another matter.) Now Netflix and friends pump the same content into homes across a continent, making culture a cross-border endeavour, too. If Europeans are to share a currency, bail each other out in times of financial need and share vaccines in a pandemic, then they need to have something in common—even if it is just bingeing on the same series. Watching fictitious northern and southern Europeans tear each other apart 2,000 years ago beats doing so in reality.

Question No. : 13

The author sees the rise of Netflix in Europe as:

A) a looming cultural threat.

B) a unifying force.

C) filling an entertainment gap.

D) an economic threat.

Question No. : 14

Which one of the following research findings would weaken the author's conclusion in the final paragraph?

A) Research shows there is a wide variance in the popularity and viewing of Netflix shows across different EU countries.

B) Research shows that Netflix has been gradually losing market share to other streaming television service providers.

C) Research shows that Netflix hits produced in France are very popular with North American audiences.

D) Research shows that older women across the EU enjoy watching romantic comedies on Netflix, whereas younger women prefer historical fiction dramas.

Question No. : 15
Based on information provided in the passage, all of the following are true, EXCEPT:
A) European television productions have the potential to become global hits.
B) national broadcasters dominate in the EU in terms of total television viewing hours.
C) only half of Netflix's original programming in the EU is now produced in America.
D) Netflix has been able to transform itself into a truly European entity.

Question No. : 16
Based only on information provided in the passage, which one of the following hypothetical Netflix shows would be most successful with audiences across the EU?
A) An Italian comedy show hosted by an international star.
B) An original German TV science fiction production.
C) A murder mystery drama set in North Africa and France.
D) A trans-Atlantic romantic drama set in Europe and America.

Question No. : 17
DIRECTIONS for the question: There is a sentence missing in the paragraph below. Look at the paragraph and decide in which blank (option 1, 2, 3, or 4) the following sentence would best fit.

Sentence: Dualism was long held as the defining feature of developing countries in contrast to developed countries, where frontier technologies and high productivity were assumed to prevail.

Paragraph: ___(1)___. At the core of development economics lies the idea of 'productive dualism': that poor countries' economies are split between a narrow 'modern' sector that uses advanced technologies and a larger 'traditional' sector characterized by very low productivity.___(2)___. While this distinction between developing and advanced economies may have made some sense in the 1950s and 1960s, it no longer appears to be very relevant. A combination of forces have produced a widening gap between the winners and those left behind.___(3)___. Convergence between poor and rich parts of the economy was arrested and regional disparities widened.___(4)___. As a result, policymakers in advanced economies are now grappling with the same questions that have long preoccupied developing economies: mainly how to close the gap with the more advanced parts of the economy.
A) Option 1
B) Option 2
C) Option 3
D) Option 4

Question No. : 18
DIRECTIONS for the question: There is a sentence missing in the paragraph below. Look at the paragraph and decide in which blank (option 1, 2, 3, or 4) the following sentence would best fit.

Sentence: And probably much earlier, moving the documentation for kissing back 1,000 years compared to what was acknowledged in the scientific community.

Paragraph: Research has hypothesised that the earliest evidence of human lip kissing originated in a very specific geographical location in South Asia 3,500 years ago.___(1)___. From there it may have spread to other regions, simultaneously accelerating the spread of the herpes simplex virus 1. According to Dr Troels Pank Arbøll and Dr Sophie Lund Rasmussen, who in a new article in the journal Science draw on a range of written sources from the earliest Mesopotamian societies, kissing was already a well-established practice 4,500 years ago in the Middle East.___(2)___. In ancient Mesopotamia, people wrote in cuneiform script on clay tablets.___(3)___. Many thousands of these clay tablets have survived to this day, and they contain clear examples that kissing was considered a part of romantic intimacy in ancient times.___(4)___. “Kissing could also have been part of friendships and family members' relations," says Dr Troels Pank Arbøll, an expert on the history of medicine in Mesopotamia.
A) Option 1
B) Option 2
C) Option 3
D) Option 4

Question No. : 19
DIRECTIONS for the question: Five jumbled up sentences (labelled 1, 2, 3, 4 and 5), related to a topic, are given below. Four of them can be put together to form a coherent paragraph. Identify the odd sentence and key in the number of that sentence as your answer.

1. The banning of Northern Lights could be considered a precursor to censoring books for “moral”, world view or religious reasons.
2. Attempts to ban books are attempts to silence authors who have summoned immense courage in telling their stories.
3. Now the banning and challenging of books in the US has escalated to an unprecedented level.
4. The widely acclaimed fantasy novel Northern Lights was banned in some parts of the US, and was the second most challenged book in the US.
5. The American Library Association documented an unparalleled number of reported book challenges in 2022, about 2,500 unique titles.

Question No. : 20
DIRECTIONS for the question: Five jumbled up sentences (labelled 1, 2, 3, 4 and 5), related to a topic, are given below. Four of them can be put together to form a coherent paragraph. Identify the odd sentence and key in the number of that sentence as your answer.

1. Self-care particularly links to loneliness, behavioural problems, and negative academic outcomes.
2. “Latchkey children” refers to children who routinely return home from school to empty homes and take care of themselves for extended periods of time.
3. Although self-care generally points to negative outcomes, it is important to consider that the bulk of research has yet to track long-term consequences.

4. In research and practice, the phrase “children in self-care” has come to replace latchkey in an effort to more accurately reflect the nature of their circumstances.
5. Although parents might believe that self-care would be beneficial for development, recent research has found quite the opposite.

Question No. : 21
DIRECTIONS for the question: The four sentences (labelled 1,2,3 and 4) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of four numbers as your answer.
1. Like the ants that make up a colony, no single neuron holds complex information like self-awareness, hope or pride.
2. Although the human brain is not yet understood enough to identify the mechanism by which emergence functions, most neurobiologists agree that complex interconnections among the parts give rise to qualities that belong only to the whole.
3. Nonetheless, the sum of all neurons in the nervous system generate complex human emotions like fear and joy, none of which can be attributed to a single neuron.
4. Human consciousness is often called an emergent property of the human brain.

Question No. : 22
DIRECTIONS for the question: The four sentences (labelled 1,2,3 and 4) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentence and key in this sequence of four numbers as your answer.

1. Contemporary African writing like ‘The Bottled Leopard’ voices this theme using two children and two backgrounds to juxtapose two varying cultures.
2. Chukwuemeka Ike explores the conflict, and casts the Western tradition as condescending, enveloping and unaccommodating towards local African practice.
3. However, their views contradict the reality, for a rich and sustaining local African cultural ethos exists for all who care, to see and experience.
4. Western Christian concepts tend to deny or feign ignorance about the existence of a genuine and enduring indigenous African tradition.

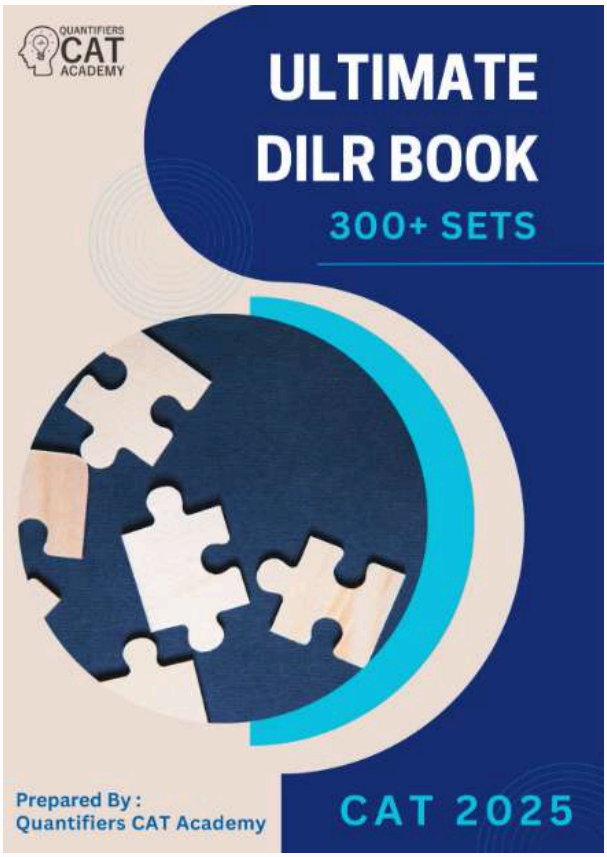
Question No. : 23
DIRECTIONS for the question: The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.

Heat waves are becoming longer, frequent and intense due to climate change. The impacts of extreme heat are unevenly experienced; with older people and young children, those with pre-existing medical conditions and on low incomes significantly more vulnerable. Adaptation to heatwaves is a significant public policy concern. Research conducted among at-risk people in the UK reveals that even vulnerable people do not perceive themselves as at risk of extreme heat; therefore, early warnings of extreme heat events do not perform as intended. This suggests that understanding how extreme heat is narrated is very important. The news media play a central role in this process and can help warn people about the potential danger, as well as about impacts on infrastructure and society.

A) Heatwaves pose an enormous risk; the media plays a pivotal role in alerting people to this danger.
B) Protection from heat waves is important but current reports and public policies seem ineffective.
C) People are vulnerable to heatwaves caused due to climate change, measures taken are ineffective.
D) News stories help in warning about heatwaves, but they have to become more effective.

Question No. : 24
DIRECTIONS for the question: The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.

People spontaneously create counterfactual alternatives to reality when they think “if only” or “what if” and imagine how the past could have been different. The mind computes counterfactuals for many reasons. Counterfactuals explain the past and prepare for the future, they implicate various relations including causal ones, and they affect intentions and decisions. They modulate emotions such as regret and relief, and they support moral judgments such as blame. The ability to create counterfactuals develops throughout childhood and contributes to reasoning about other people's beliefs, including their false beliefs.
A) People create counterfactual alternatives to reality for various reasons, including reasoning about other people's beliefs.
B) Counterfactual thinking helps to reverse past and future actions and reason out false beliefs.
C) Counterfactual alternatives to reality are created for a variety of reasons and is part of one's developmental process.
D) Counterfactuals help people to prepare for the future by understanding intentions and making decisions.



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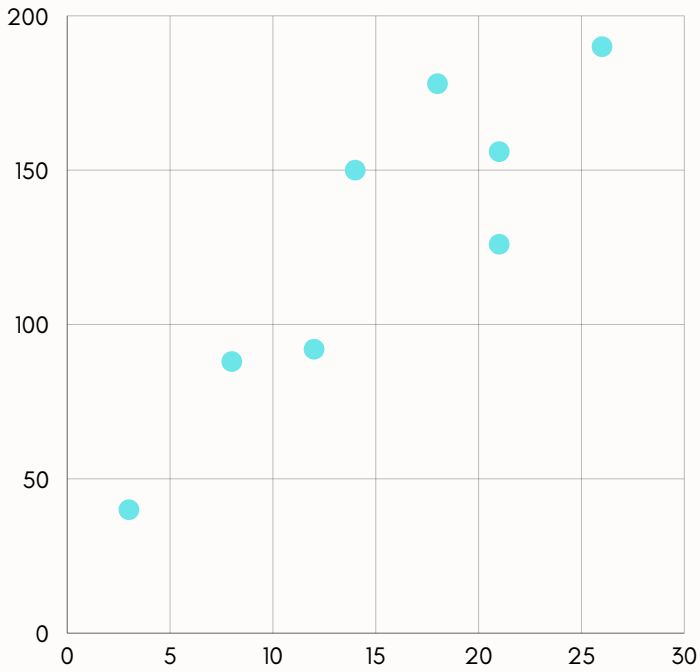

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CAT 2023 Slot - 2 DILR

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Odsville has five firms – Alfloo, Bzygoo, Czechy, Drjbna and Elavalaki. Each of these firms was founded in some year and also closed down a few years later.

Each firm raised Rs. 1 crore in its first and last year of existence. The amount each firm raised every year increased until it reached a maximum, and then decreased until the firm closed down. No firm raised the same amount of money in two consecutive years. Each annual increase and decrease was either by Rs. 1 crore or by Rs. 2 crores.
The table below provides partial information about the five firms.

Firm	First year of existence	Last year of existence	Total amount raised (Rs. Crores)
Alfloo	2009	2016	21
Bzygoo	2012	2015	
Czechy	2013		9
Drjbna	2011	2015	10
Elavalaki	2010		13

Question No. : 1
For which firm(s) can the amounts raised by them be concluded with certainty in each year?
A) Only Drjbna
B) Only Czechy
C) Only Czechy and Drjbna
D) Only Bzygoo and Czechy and Drjbna

Question No. : 2
What best can be concluded about the total amount of money raised in 2015?
A) It is either Rs. 8 crores or Rs. 9 crores.
B) It is exactly Rs. 8 crores.
C) It is either Rs. 7 crores or Rs. 8 crores or Rs. 9 crores.
D) It is either Rs. 7 crores or Rs. 8 crores.

Question No. : 3
What is the largest possible total amount of money (in Rs. crores) that could have been raised in 2013?

Question No. : 4
If Elavalaki raised Rs. 3 crores in 2013, then what is the smallest possible total amount of money (in Rs. crores) that could have been raised by all the companies in 2012?
A) 11
B) 9
C) 12
D) 10

Question No. : 5

If the total amount of money raised in 2014 is Rs. 12 crores, then which of the following is not possible?

A) Alfloo raised the same amount of money as Bzygoo in 2014.
B) Bzygoo raised more money than Elavalaki in 2014.
C) Alfloo raised the same amount of money as Drjbna in 2013.
D) Bzygoo raised the same amount of money as Elavalaki in 2013.

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Three participants – Akhil, Bimal and Chatur participate in a random draw competition for five days. Every day, each participant randomly picks up a ball numbered between 1 and 9. The number on the ball determines his score on that day. The total score of a participant is the sum of his scores attained in the five days. The total score of a day is the sum of participants' scores on that day. The 2-day average on a day, except on Day 1, is the average of the total scores of that day and of the previous day. For example, if the total scores of Day 1 and Day 2 are 25 and 20, then the 2-day average on Day 2 is calculated as 22.5. Table 1 gives the 2-day averages for Days 2 through 5.

Table 1: 2-day averages for Days 2 through 5

Day 2	Day 3	Day 4	Day 5
15	15.5	16	17

Participants are ranked each day, with the person having the maximum score being awarded the minimum rank (1) on that day. If there is a tie, all participants with the tied score are awarded the best available rank. For example, if on a day Akhil, Bimal, and Chatur score 8, 7 and 7 respectively, then their ranks will be 1, 2 and 2 respectively on that day. These ranks are given in Table 2.

Table 2: Ranks of participants on each day

	Day 1	Day 2	Day 3	Day 4	Day 5
Akhil	1	2	2	3	3
Bimal	2	3	2	1	1
Chatur	3	1	1	2	2

The following information is also known.

1. Chatur always scores in multiples of 3. His score on Day 2 is the unique highest score in the competition. His minimum score is observed only on Day 1, and it matches Akhil's score on Day 4.
2. The total score on Day 3 is the same as the total score on Day 4.
3. Bimal's scores are the same on Day 1 and Day 3.

Question No. : 6

What is Akhil's score on Day 1?

A) 7
B) 5
C) 6
D) 8

Question No. : 7
Who attains the maximum total score?
A) Akhil
B) Cannot be determined
C) Bimal
D) Chatur

Question No. : 8
What is the minimum possible total score of Bimal? (type in numerical)

Question No. : 9
If the total score of Bimal is a multiple of 3, what is the score of Akhil on Day 2?
A) 5
B) 4
C) Cannot be determined
D) 6

Question No. : 10
If Akhil attains a total score of 24, then what is the total score of Bimal? (type in numerical)

DIRECTIONS for the question: Read the information given below and answer the question that follows.

There are nine boxes arranged in a 3×3 array as shown in Tables 1 and 2. Each box contains three sacks. Each sack has a certain number of coins, between 1 and 9, both inclusive.
The average number of coins per sack in the boxes are all distinct integers. The total number of coins in each row is the same. The total number of coins in each column is also the same.

	1st column	2nd column	3rd column
1st row		9	6
2nd row	2		
3rd row	8		

Table 1

	1st column	2nd column	3rd column
1st row	1**	2*	2*
2nd row	1**	0*	3*
3rd row	3*	2**	0**

Table 2

Table 1 gives information regarding the median of the numbers of coins in the three sacks in a box for some of the boxes. In Table 2 each box has a number which represents the number of sacks in that box having more than 5 coins. That number is followed by a * if the sacks in that box satisfy exactly one among the following three conditions, and it is followed by ** if two or more of these conditions are satisfied.

i) The minimum among the numbers of coins in the three sacks in the box is 1.
ii) The median of the numbers of coins in the three sacks is 1.
iii) The maximum among the numbers of coins in the three sacks in the box is 9.

Question No. : 11
What is the total number of coins in all the boxes in the 3rd row?
A) 15
B) 45
C) 36
D) 30

Question No. : 12
How many boxes have at least one sack containing 9 coins?
A) 3
B) 8
C) 4
D) 5

Question No. : 13
For how many boxes are the average and median of the numbers of coins contained in the three sacks in that box the same?

Question No. : 14
How many sacks have exactly one coin?

Question No. : 15
In how many boxes do all three sacks contain different numbers of coins?

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Anjali, Bipasha, and Chitra visited an entertainment park that has four rides. Each ride lasts one hour and can accommodate one visitor at one point. All rides begin at 9 am and must be completed by 5 pm except for Ride-3, for which the last ride has to be completed by 1 pm.

Ride gates open every 30 minutes, e.g. 10 am, 10:30 am, and so on. Whenever a ride gate opens, and there is no visitor inside, the first visitor waiting in the queue buys the ticket just before taking the ride. The ticket prices are Rs. 20, Rs. 50, Rs. 30 and Rs. 40 for Rides 1 to 4, respectively. Each of the three visitors took at least one ride and did not necessarily take all rides. None of them took the same ride more than once. The movement time from one ride to another is negligible, and a visitor leaves the ride immediately after the completion of the ride. No one takes a break inside the park unless mentioned explicitly.

The following information is also known.
1. Chitra never waited in the queue and completed her visit by 11 am after spending Rs. 50 to pay for the ticket(s).
2. Anjali took Ride-1 at 11 am after waiting for 30 mins for Chitra to complete it. It was the only ride where Anjali waited.
3. Bipasha began her first of three rides at 11:30 am. All three visitors incurred the same amount of ticket expense by 12:15 pm.

4. The last ride taken by Anjali and Bipasha was the same, where Bipasha waited 30 mins for Anjali to complete her ride. Before standing in the queue for that ride, Bipasha took a 1-hour coffee break after completing her previous ride.

Question No. : 16
What was the total amount spent on tickets (in Rs.) by Bipasha?
A) 100
B) 120
C) 110
D) 90

Question No. : 17
Which were all the rides that Anjali completed by 2:00 pm?
A) Ride-1 and Ride-4
B) Ride-1, Ride-2, and Ride-4
C) Ride-1, Ride-2, and Ride-3
D) Ride-1 and Ride-3

Question No. : 18
Which ride was taken by all three visitors?
A) Ride-4
B) Ride-2
C) Ride-3
D) Ride-1

Question No. : 19
How many rides did Anjali and Chitra take in total? (type in numerical)

Question No. : 20
What was the total amount spent on tickets (in Rs.) by Anjali? (type in numerical)

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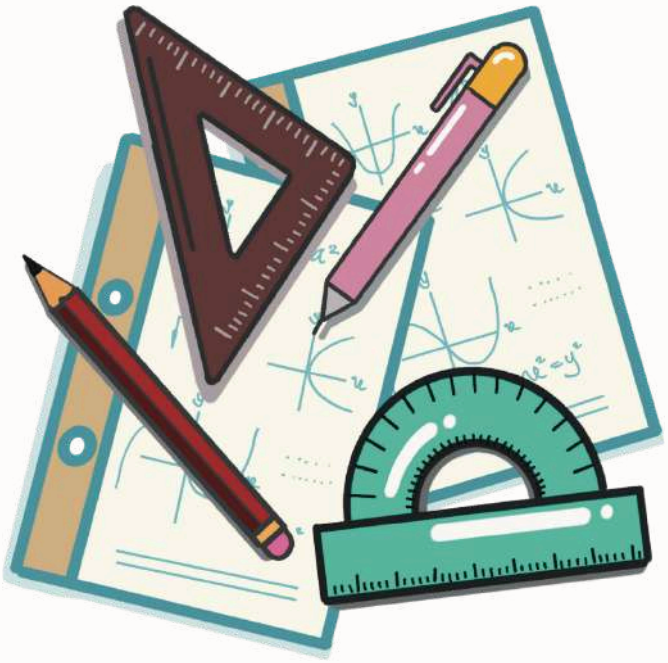

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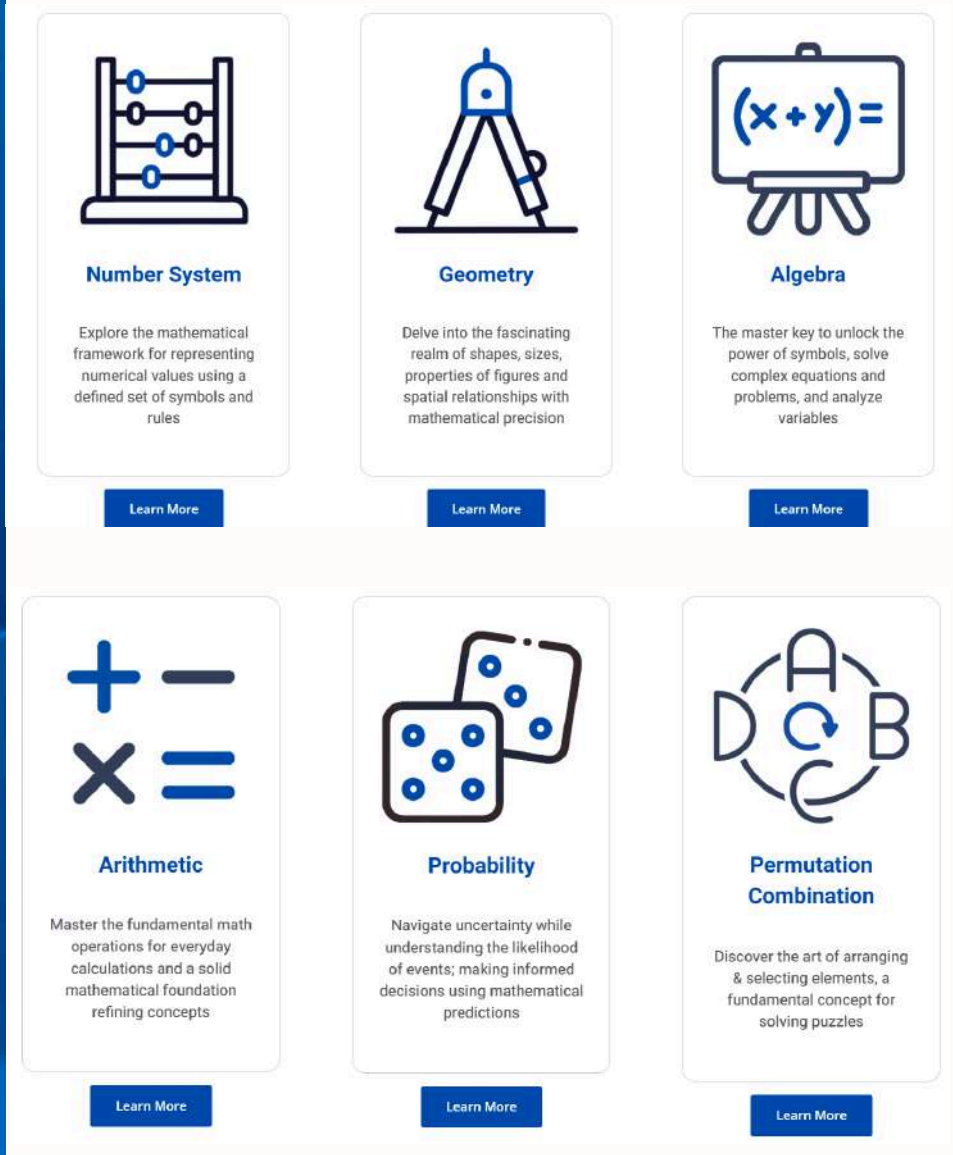

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CAT 2023 Slot - 2 Quant

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 1

Any non-zero real numbers x , y such that y ≠ 3 and $\frac{x}{y} < \frac{x+3}{y-3}$, will satisfy the condition:

A) $\frac{x}{y} < \frac{y}{x}$

B) If y > 10, then – x > y
C) If y < 0, then – x < y
D) If x < 0, then – x < y

Question No. : 2

For any natural numbers m, n, and k, such that k divides both m + 2n and 3m + 4n, k must be a common divisor of
A) 2m and 3n
B) 2m and n
C) m and n
D) m and 2n

Question No. : 3

The sum of all possible values of x satisfying the equations $2^{4x^2} - 2^{2x^2-x+15} + 2^{2x+30} = 0$, is

A) 3/2

B) 5/2

C) 1/2

D) 3

Question No. : 4

Let a, b, m and n be natural numbers such that a > 1 and b > 1. If $a^m b^n = 144145$, then the largest possible value of n – m is
A) 289
B) 580
C) 579
D) 290

Question No. : 5

Let k be the largest integer such that the equation (x – 1)2 + 2kx + 11 = 0 has no real roots. If y is a positive real number, then the least possible value of k/4y + 9y is

Question No. : 6

The number of positive integers less than 50, having exactly two distinct factors other than 1 and itself, is

Question No. : 7

For some positive real number x, if $\log_{\sqrt{3}}(x)+\frac{\log_x(25)}{\log_x(0.008)}=\frac{16}{3}$, then the value of $\log_3(3x^2)$ is

Question No. : 8

Pipes A and C are fill pipes while Pipe B is a drain pipe of a tank. Pipe B empties the full tank in one hour less than the time taken by Pipe A to fill the empty tank. When pipes A, B and C are turned on together, the empty tank is filled in two hours. If pipes B and C are turned on together when the tank is empty and Pipe B is turned off after one hour, then Pipe C takes another one hour and 15 minutes to fill the remaining tank. If Pipe A can fill the empty tank in less than five hours, then the time taken, in minutes, by Pipe C to fill the empty tank is

A) 60
B) 75
C) 120
D) 90

Question No. : 9

Minu purchases a pair of sunglasses at Rs.1000 and sells to Kanu at 20% profit. Then, Kanu sells it back to Minu at 20% loss. Finally, Minu sells the same pair of sunglasses to Tanu. If the total profit made by Minu from all her transactions is Rs. 500, then the percentage of profit made by Minu when she sold the pair of sunglasses to Tanu is

A) 31.25%
B) 26%
C) 52%
D) 35.42%

Question No. : 10

In a company, 20% of the employees work in the manufacturing department. If the total salary obtained by all the manufacturing employees is one-sixth of the total salary obtained by all the employees in the company, then the ratio of the average salary obtained by the manufacturing employees to the average salary obtained by the non-manufacturing employees is

A) 5 : 4
B) 4 : 5
C) 5 : 6
D) 6 : 5

Question No. : 11
Ravi is driving at a speed of 40 km/h on a road. Vijay is 54 meters behind Ravi and driving in the same direction as Ravi. Ashok is driving along the same road from the opposite direction at a speed of 50 km/h and is 225 meters away from Ravi. The speed, in km/h, at which Vijay should drive so that all the three cross each other at the same time, is
A) 61.6
B) 64.4
C) 67.2
D) 58.8

Question No. : 12
The price of a precious stone is directly proportional to the square of its weight. Sita has a precious stone weighing 18 units. If she breaks it into four pieces with each piece having distinct integer weight, then the difference between the highest and lowest possible values of the total price of the four pieces will be 288000. Then, the price of the original precious stone is
A) 972000
B) 1296000
C) 1620000
D) 1944000

Question No. : 13
Anil borrows Rs 2 lakhs at an interest rate of 8% per annum, compounded half-yearly. He repays Rs 10320 at the end of the first year and closes the loan by paying the outstanding amount at the end of the third year. Then, the total interest, in rupees, paid over the three years is nearest to
A) 33130
B) 45311
C) 51311
D) 40991

Question No. : 14
Jayant bought a certain number of white shirts at the rate of Rs 1000 per piece and a certain number of blue shirts at the rate of Rs 1125 per piece. For each shirt, he then set a fixed market price which was 25% higher than the average cost of all the shirts. He sold all the shirts at a discount of 10% and made a total profit of Rs 51000. If he bought both colors of shirts, then the maximum possible total number of shirts that he could have bought is

Question No. : 15
If certain amount of money is divided equally among n person, each one receives Rs 352. However, if two persons receive Rs 506 each and the remaining amount is divided equally among the other persons, each of them received less than or equal to Rs 330. Then, the maximum possible value of n is

Question No. : 16
A container has 40 liters of milk. Then, 4 liters are removed from the container and replaced with 4 liters of water. This process of replacing 4 liters of the liquid in the container with an

equal volume of water is continued repeatedly. The smallest number of times of doing this process, after which the volume of milk in the container becomes less than that of water, is

Question No. : 17
A triangle is drawn with its vertices on the circle C such that one of its sides is a diameter of C and the other two sides have their lengths in the ratio a:b. If the radius of the circle is r, then the area of the triangle is

A) $\frac{abr^2}{a^2+b^2}$ B) $\frac{abr^2}{2(a^2+b^2)}$ C) $\frac{2abr^2}{a^2+b^2}$ D) $\frac{4abr^2}{a^2+b^2}$

Question No. : 18
In a rectangle ABCD, AB = 9 cm and BC = 6 cm. P and Q are two points on BC such that the areas of the figures ABP, APQ, and AQCD are in geometric progression. If the area of the figure AQCD is four times the area of triangle ABP, then BP : PQ : QC is
A) 1 : 1 : 2
B) 2 : 4 : 1
C) 1 : 2 : 1
D) 1 : 2 : 4

Question No. : 19
The area of the quadrilateral bounded by the Y-axis, the line x = 5, and the lines $|x - y| - |x - 5| = 2$, is

Question No. : 20
Let both the series $a_1, a_2, a_3, \ldots$ and $b_1, b_2, b_3 \ldots$ be in arithmetic progression such that the common differences of both the series are prime numbers. If $a_5 = b_9$, $a_{19} = b_{19}$ and $b_2 = 0$, then a_{11} equals
A) 79
B) 84
C) 83
D) 86

Question No. : 21
If $p^2 + q^2 - 29 = 2pq - 20 = 52 - 2pq$, then the difference between the maximum and minimum possible value of $(p^3 - q^3)$ is
A) 486
B) 378
C) 189
D) 243

Question No. : 22
Let a_n and b_n be two sequences such that $a_n = 13 + 6\ (n - 1)$ and $b_n = 15 + 7\ (n - 1)$ for all natural numbers n. Then, the largest three digit integer that is common to both these sequences, is

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VARC

1. Correct Answer:- B

Explanation:- In the passage, the author mentions that historians, in dealing with basic facts like the date and location of historical events (e.g., the Battle of Hastings in 1066), rely on "auxiliary sciences" of history, which include archaeology. The author notes that accuracy in such basic facts is important for historians but compares praising a historian for accuracy to praising an architect for using well-seasoned timber - a necessary condition but not the essential function. The passage implies that archaeology and other auxiliary sciences support historians in establishing these basic facts. Refer to the lines “But praise a historian…..”
Therefore, option 2 is the most appropriate choice based on the information provided in the passage.

2. Correct Answer:- B

Explanation:- Option 2 is the correct answer as it agrees with the perspective of the passage that the interpretation of facts can be subjective and influenced by different perspectives. The passage argues that historians play a vital role in selecting and interpreting facts, and Option 2 supports this by suggesting that facts, like truth, can be relative.

3. Correct Answer:- C

Explanation:- According to the passage, the role of historians is not limited to establishing basic facts. They are expected to delve deeper into understanding the context and motivations behind historical events. This requires a selective and interpretive approach to historical writing. Option 3 is the only one that reflects this comprehensive and contextual approach to historical writing, focusing on understanding the underlying causes and influences that shaped the historical event.

4. Correct Answer:- C

Explanation:- Option 2 provides an accurate representation of the common-sense perspective described in the passage. This perspective acknowledges historical methods beyond positivism, as stated in option 4. According to the passage, the common-sense view also involves a fallacious belief that historical facts are objective and independent of interpretation, as mentioned in option 1. That takes us to the right option i.e. option 3 because it is rather contrasting what is being said in the passage.

5. Correct Answer:- C

Explanation:- Option A- This is a valid criticism according to the passage. The author points out that Deneen fails to recognize liberalism's historical ability to reform itself and address internal problems.
Option B- This is a valid criticism. The passage suggests that while Deneen accurately highlights the current problems with liberalism, he may be overly pessimistic about its future.
Option D is also a valid criticism.
Only option C is the right answer. Although the passage is critical of Deneen's extreme pessimism regarding the future of liberalism, his narrow definition of liberalism limited to

individual freedoms, and his fixation on the essence of liberalism, it doesn't address his tendency to look back to premodern notions specifically.

6. Correct Answer:- D

Explanation:- Let's evaluate each option- Option A introduces the idea of a return to past liberalism, which is not explicitly mentioned in the passage. The author does criticize the current state of liberalism and its problems but doesn't specifically address the possibility of returning to a past form of liberalism.
For option B. While the passage criticizes the Davos elite, it focuses more on their hypocrisy and accumulation of wealth rather than how they have captured the debate around liberalism. The primary emphasis is on their actions rather than their control of the debate.
Option C introduces a positive aspect of the rise in liberalism, which is not consistent with the author's overall criticism of the current state of liberalism and the actions of the Davos elite.
In contrast, option D aligns with the passage's emphasis on the hypocrisy of the liberal rich and their accumulation of wealth while professing to adhere to liberal values. Therefore, option D is the most accurate interpretation based on the information provided in the passage.

7. Correct Answer:- A

Explanation:- For option B- "'The gap between liberalism's claims about itself and the lived reality of the citizenry' is now so wide that 'the lie can no longer be accepted.'" - This statement highlights a significant gap between liberalism's claims and the lived reality of the citizens, indicating a disillusionment with liberalism.
For option C-"Democracy has degenerated into a theatre of the absurd." - This statement suggests a negative assessment of the current state of democracy, indicating a decline in its quality.
For option D- ". . . the creation of a business aristocracy, the rise of vast companies." - This statement points to the creation of a business aristocracy and the rise of large companies, indicating a concentration of economic power, which could be seen as evidence of the decline of liberalism.
So except option A rest are evidence in the context of the passage.

8. Correct Answer:- D

Explanation:- The author is most likely to agree with Option 4 as it supports the author's argument in the passage that liberalism has a history of reforming itself in response to challenges. The author emphasizes that liberalism's success is not solely due to its dominance over the past century, but rather its ability to address internal issues and adapt to change. Rest all options are eliminated. For example, in the case of option 3, the passage doesn't explicitly address the need to find a substitute for liberalism, and the author's emphasis is more on the potential for reform within liberalism. Therefore, the author is likely to disagree with this statement.

9. Correct Answer:- D

Explanation:- The passage suggests that one solution to the environmental impact of fast fashion is to buy high-quality items that shed less and last longer. This aligns with the concept of 'slow fashion,' which emphasizes durable and long-lasting clothing as opposed to the disposable nature of fast fashion.

10. Correct Answer:- D

Explanation:- The irony of "thrifting" and its potential for unforeseen environmental effects are discussed in the chapter. The paragraph raises a possible environmental concern with thrift shopping, despite the fact that it is frequently viewed as a sustainable and environmentally beneficial activity. The article specifically cites a study that Patagonia commissioned that shows worn-out clothing—often seen in thrift stores—has a tendency to shed a greater number of microfibers. These microfibers contribute to the microfiber pollution that can wind up in rivers and seas. Therefore, by shedding microfibers during the washing of old items, thrift shopping—despite its ecologically conscientious objectives to decrease waste—may cause environmental difficulties.

11. Correct Answer:- A

Explanation:- The central idea of the passage revolves around the environmental impact of the fashion industry, the promotion of second-hand shopping as a sustainable alternative, and the potential challenges and considerations associated with second-hand consumption. To identify the statement that would undermine the central idea, we need to look for an option that contradicts or diminishes the importance of these key elements.
For option B- This statement supports the central idea by addressing the environmental impact of clothes ending up in landfills. It does not undermine the central idea.
For option D- This statement is not directly related to the central idea of the environmental impact of the fashion industry and the benefits of second-hand shopping. It introduces a new aspect of purchasing behaviour but does not necessarily undermine the main focus of the passage.
Option A would go against the main idea of the passage because it emphasizes the significance of second-hand shopping not only for purchasing high-quality clothing but also as a sustainable and eco-friendly alternative to fast fashion. If second-hand stores limit their inventory to only high-quality items, it could reduce the variety and affordability that make second-hand shopping accessible and eco-friendly for a larger audience.

12. Correct Answer:- B

Explanation:-
The author does not explicitly mention the reasons why companies like ThredUP have not caught on in the UK. However, based on the information provided in the passage, we can infer the likely reasons. Let's analyze each option:
Option A- This is consistent with the passage, as it suggests that high-end retailers prioritize their brand image over sustainability.
Option B- The passage does not provide information about the purchasing habits of the British regarding second-hand clothing, so we cannot confirm or deny this statement.

Option C- This is consistent with the passage, as it mentions that high-end retailers would rather put brand before sustainability, implying that recycling might not be financially attractive for them.
Option D- This is consistent with the passage, as it suggests that luxury brands are hesitant to circulate their latest season stock at lower prices, indicating a concern about devaluing their products.

13. Correct Answer:- B

Explanation:-
The passage suggests that Netflix, along with other global firms, contributes to a shared cultural experience by providing content that can be enjoyed across different European countries. The author emphasizes the importance of having something in common, such as binge-watching the same series, as a form of cultural unity. The use of Netflix to pump the same content into homes across the continent is portrayed as a positive aspect of cultural integration.

14. Correct Answer:- A

Explanation:-
First, we will eliminate options C and D. If anything, suggests success in appealing to audiences outside of Europe and does not necessarily weaken the idea of cultural unity within Europe and 4th one is only information about age-related preferences but doesn't specifically address the shared cultural experience or lack thereof. Option B is something related to Netflix's business so eliminated.
Considering the options, Option A (Research shows there is a wide variance in the popularity and viewing of Netflix shows across different EU countries) is the one that would likely weaken the author's conclusion by indicating that the popularity and viewing habits of Netflix shows vary significantly across European countries, suggesting a lack of a unified cultural experience.

15. Correct Answer:- D

Explanation:-
According to the passage, although Netflix has established offices in various European countries, the ultimate decision-making power still lies with the American executives. As a result, the content produced by Netflix may still exhibit a somewhat mid-Atlantic quality, and the company's executive decisions are still primarily controlled by Americans. Thus, it would be inaccurate to claim that Netflix has fully transformed into a truly European entity.
Rest all are options can be considered from the author's point of view so eliminated.

16. Correct Answer:- C

Explanation:-
The passage suggests that certain genres, like murder mystery dramas, have a more universal appeal. Additionally, given the emphasis on Netflix's ability to provide content that can be enjoyed across borders and the success of shows like "Lupin," which is a French crime caper, a murder mystery drama set in North Africa and France aligns with the potential for a more widespread appeal across the EU. So option 3 is the right choice.

17. Correct Answer:- B

Explanation:-
The highlighted sentence talks about the traditional view held dualism, the coexistence of advanced and traditional economic sectors, as a defining feature of developing countries, in contrast to developed countries where advanced technologies and high productivity were assumed to dominate.
The reason for placing the missing sentence in Option 2 is to maintain the logical flow of ideas within the paragraph. The sentence talks about "productive dualism" in developing countries, and it logically fits right after the introduction of this concept in the first sentence of the paragraph. This placement helps to establish the context and sets the stage for the subsequent discussion about the changing relevance of this dualism and the widening gap between winners and those left behind.

18. Correct Answer:- B

Explanation:-
The sentence given on top of the passage talks about taking the documentation for kissing back to 1000 years compared to waht was earlier stated. So it should come after what was earlier stated as the possible time. It could not be option 1 as it states the time as well as place. The sentence that follows has the words "from there" that answers from South Asia. There seems to be no gap here. The following sentence states that kissing was a well-established practice more than 4500 years ago, some 1000 years earlier than what has been stated before. So, blank 2 is the suitable place to fit in the sentence. In blank 3, the thing about tablets is further carried on without a gap. The sentence after blank 4 elaborates kissing as a practice between friends and family.
So, option 2 is the answer.

19. Correct Answer:- 2

Explanation:-
Sentence 2 is the odd one out.
The sentences form a coherent paragraph discussing an early indication of broader censorship, the escalating trend in banning and challenging books in the US, the specific example of the widely acclaimed fantasy novel Northern Lights being banned, and the American Library Association documenting an unprecedented number of reported book challenges in 2022. While option 2 is talking about efforts to ban books are essentially attempts to stifle the voices of authors who have demonstrated immense bravery in sharing their stories, highlighting the censorship's impact on freedom of expression and diverse narratives and making it the odd one in the same order.

20. Correct Answer:- 3

Explanation:-
The other sentences (1, 2, 4, and 5) form a coherent paragraph discussing the concept of "children in self-care," its association with negative outcomes like loneliness and academic

problems, the replacement of "latchkey" with "children in self-care" in research and practice, and recent research findings contradicting the belief that self-care is beneficial for development. While sentence 3 highlights a cautionary note in the discussion about self-care and its association with negative outcomes.

21. Correct Answer:- 4132

Explanation:-
The correct sequence is 4132:
sentence 4 introduces the idea that human consciousness is considered an emergent property of the brain, setting the context for the discussion.
sentence 1 then elaborates on the concept introduced in Sentence 4, comparing the organization of neurons to that of ants in a colony and emphasizing that no single neuron holds complex information.
sentence 3 builds on the idea by highlighting the collective contribution of all neurons to generate complex human emotions.
Sentence 2 finally provides additional information about the complexity of the human brain and how neurobiologists recognize that complex interconnections give rise to emergent qualities.
Together, these sentences form a coherent paragraph that explores the concept of human consciousness as an emergent property of the brain and the intricate interplay of neurons in generating complex mental processes.

22. Correct Answer:- 4321

Explanation:-
The correct sequence 4321:
Sentence 4 introduces the idea that Western Christian concepts often overlook or deny the presence of a genuine and lasting African tradition. This sentence introduces the theme of the para.
Sentence 3 follows up on the idea from Sentence 4, contradicting the views that deny the existence of African tradition and asserting the reality of a rich local cultural ethos.
Sentence 2 states that writer Chukwuemeka Ike explores the "conflict". Which conflict is he referring to? It's the conflict between denying the existence of a genuine and enduring indigenous African tradition and the reality that states a rich and sustaining local African cultural ethos exists for all who care, to see and experience. It also states that Ike casts the Western tradition as condescending, enveloping and unaccommodating towards local African practice. Which has been stated earlier.
Sentence 1 talks about "this theme", the theme of denying the existance of something that is genuinely there by using two children and two backgrounds.
So, the correct sequence is 4321

23. Correct Answer:- A

Explanation:-
Option A is the right choice as the passage talks about how Heatwaves are worsening due to climate change, disproportionately affecting vulnerable groups like the elderly, children, and

those with medical conditions or low incomes. Research in the UK suggests that even at-risk individuals may not perceive themselves as vulnerable during extreme heat, impacting the effectiveness of early warnings. The passage emphasizes the role of news media in conveying the dangers and societal impacts of extreme heat.

24. Correct Answer:- C

Explanation:-
The passage talks about how People naturally create counterfactual alternatives to reality, pondering "if only" or "what if" scenarios that explain the past and influence future decisions. This cognitive process, develops ping throughout childhood, also impacts emotions, moral judgments, and reasoning about others' beliefs. Counterfactual thinking serves multifaceted roles, shaping perceptions of causality and contributing to various aspects of human cognition and decision-making. So, option 3 is the right choice.
Section : DI & Reasoning

25. Correct Answer:- C

Explanation:-
Given that each firm raised Rs 1 crore in its first and last year. Also, each annual increase and decrease was either of Rs 1 crore or by Rs 2 crores.
Let us consider for Alfloo,
First year of existence, 2009 = Rs 1 crore = Last year of existence, 2016
Let amount raised in 2010, 2011, 2012, 2013, 2014, 2015 be a, b, c, d, e and f respectively
Solving, $1 + a + b + c + d + e + f + 1 = 21$
$\Rightarrow a + b + c + d + e + f = 19$
Now, even if we consider minimum annual increase and decrease annually,
The values can be a = 2, b = 3, c = 4 or 5, d = 5 or 4, e = 3 and f = 2
Now for Bzygoo,
First year of existence, 2012 = Rs 1 crore = Last year of existence, 2015
The possibilities for the amount raised in 2013 = 2 or 3 and in 2014 = 3 or 2 respectively
Thus the total amount raised by Bzygoo = Rs 7 crores
Now for Czechy,
First year of existence, 2013 = Rs 1 crore
Total amount raised = Rs 9 crores
Now, if we consider Year 2016 as the last year of existence
The possible values of amount raised for
Year 2014 = 2 or 3, Year 2015 = 3 or 2 and Year 2016 = 1
The possible sum = Rs 7 crores (maximum)
So, the last year of existence for the firm Czechy has to be 2017 with only possible values
Year 2013 = 1, Year 2014 = 2, Year 2015 = 3, Year 2016 = 2 and Year 2017 = 1
Thus, the total amount raised = Rs 9 crores
Now for Drjbna,
First year of existence, 2011 = Rs 1 crore = Last year of existence, 2015
Total amount raised = Rs 10 crores
The only possible value of amount raised for
Year 2012 = 2, Year 2013 = 4 and Year 2014 = 2

Now for Elavalaki,
Total amount raised = Rs 13 crores
First year of existence, 2011 = Rs 1 crore but last year of existence is not given
Considering the minimum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 2, Year 2012 = 3 or 4, Year 2013 = 4 or 3, Year 2014 = 2 and Year 2015 = 1 (such that Year 2015 is the last year of existence)
Considering the maximum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 3, Year 2012 = 5, Year 2013 = 3, Year 2014 = 1 (such that Year 2014 is the last year of existence)
The rest of the information can be gathered as follows-

Year/Firm	Alfloo	Bzygoo	Czechy	Drjbna	Elavalaki		Total (crores)
2009	1	–	–	–	–	–	1
2010	2	–	–	–	1	1	3
2011	3	–	–	1	2	3	6/7
2012	4/5	1	–	2	3/4	5	10/11/12/13
2013	5/4	2/3	1	4	4/3	3	14/15/16/17
2014	3	3/2	2	2	2	1	10/11/12
2015	2	1	3	1	1	–	7/8
2016	1	–	2	–	–	–	3
2017	–	–	1	–	–	–	1
Total (crores)	21	7	9	10	13	13	60

The amount raised by only firms Czechy and Drjbna can be concluded with certainty in each year.

26. Correct Answer:- D

Explanation:-
Given that each firm raised Rs 1 crore in its first and last year. Also, each annual increase and decrease was either of Rs 1 crore or by Rs 2 crores.
Let us consider for Alfloo,
First year of existence, 2009 = Rs 1 crore = Last year of existence, 2016
Let amount raised in 2010, 2011, 2012, 2013, 2014, 2015 be a, b, c, d, e and f respectively
Solving, $1 + a + b + c + d + e + f + 1 = 21$
$\Rightarrow a + b + c + d + e + f = 19$
Now, even if we consider minimum annual increase and decrease annually,
The values can be a = 2, b = 3, c = 4 or 5, d = 5 or 4, e = 3 and f = 2
Now for Bzygoo,
First year of existence, 2012 = Rs 1 crore = Last year of existence, 2015
The possibilities for the amount raised in 2013 = 2 or 3 and in 2014 = 3 or 2 respectively
Thus the total amount raised by Bzygoo = Rs 7 crores
Now for Czechy,
First year of existence, 2013 = Rs 1 crore
Total amount raised = Rs 9 crores
Now, if we consider Year 2016 as the last year of existence
The possible values of amount raised for
Year 2014 = 2 or 3, Year 2015 = 3 or 2 and Year 2016 = 1

The possible sum = Rs 7 crores (maximum)
So, the last year of existence for the firm Czechy has to be 2017 with only possible values
Year 2013 = 1, Year 2014 = 2, Year 2015 = 3, Year 2016 = 2 and Year 2017 = 1
Thus, the total amount raised = Rs 9 crores
Now for Drjbna,
First year of existence, 2011 = Rs 1 crore = Last year of existence, 2015
Total amount raised = Rs 10 crores
The only possible value of amount raised for
Year 2012 = 2, Year 2013 = 4 and Year 2014 = 2
Now for Elavalaki,
Total amount raised = Rs 13 crores
First year of existence, 2011 = Rs 1 crore but last year of existence is not given
Considering the minimum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 2, Year 2012 = 3 or 4, Year 2013 = 4 or 3, Year 2014 = 2 and Year 2015 = 1 (such that Year 2015 is the last year of existence)
Considering the maximum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 3, Year 2012 = 5, Year 2013 = 3, Year 2014 = 1 (such that Year 2014 is the last year of existence)
The rest of the information can be gathered as follows-

Year/Firm	Alfloo	Bzygoo	Czechy	Drjbna	Elavalaki		Total (crores)
2009	1	–	–	–	–	–	1
2010	2	–	–	–	1	1	3
2011	3	–	–	1	2	3	6/7
2012	4/5	1	–	2	3/4	5	10/11/12/13
2013	5/4	2/3	1	4	4/3	3	14/15/16/17
2014	3	3/2	2	2	2	1	10/11/12
2015	2	1	3	1	1	–	7/8
2016	1	–	2	–	–	–	3
2017	–	–	1	–	–	–	1
Total (crores)	21	7	9	10	13	13	60

The total amount of money raised in 2015 can be either Rs. 7 crores or Rs. 8 crores

27. Correct Answer:- 17

Explanation:-
Given that each firm raised Rs 1 crore in its first and last year. Also, each annual increase and decrease was either of Rs 1 crore or by Rs 2 crores.
Let us consider for Alfloo,
First year of existence, 2009 = Rs 1 crore = Last year of existence, 2016
Let amount raised in 2010, 2011, 2012, 2013, 2014, 2015 be a, b, c, d, e and f respectively
Solving, $1 + a + b + c + d + e + f + 1 = 21$
$\Rightarrow a + b + c + d + e + f = 19$
Now, even if we consider minimum annual increase and decrease annually,
The values can be a = 2, b = 3, c = 4 or 5, d = 5 or 4, e = 3 and f = 2
Now for Bzygoo,

First year of existence, 2012 = Rs 1 crore = Last year of existence, 2015
The possibilities for the amount raised in 2013 = 2 or 3 and in 2014 = 3 or 2 respectively
Thus the total amount raised by Bzygoo = Rs 7 crores
Now for Czechy,
First year of existence, 2013 = Rs 1 crore
Total amount raised = Rs 9 crores
Now, if we consider Year 2016 as the last year of existence
The possible values of amount raised for
Year 2014 = 2 or 3, Year 2015 = 3 or 2 and Year 2016 = 1
The possible sum = Rs 7 crores (maximum)
So, the last year of existence for the firm Czechy has to be 2017 with only possible values
Year 2013 = 1, Year 2014 = 2, Year 2015 = 3, Year 2016 = 2 and Year 2017 = 1
Thus, the total amount raised = Rs 9 crores
Now for Drjbna,
First year of existence, 2011 = Rs 1 crore = Last year of existence, 2015
Total amount raised = Rs 10 crores
The only possible value of amount raised for
Year 2012 = 2, Year 2013 = 4 and Year 2014 = 2
Now for Elavalaki,
Total amount raised = Rs 13 crores
First year of existence, 2011 = Rs 1 crore but last year of existence is not given
Considering the minimum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 2, Year 2012 = 3 or 4, Year 2013 = 4 or 3, Year 2014 = 2 and Year 2015 = 1 (such that Year 2015 is the last year of existence)
Considering the maximum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 3, Year 2012 = 5, Year 2013 = 3, Year 2014 = 1 (such that Year 2014 is the last year of existence)
The rest of the information can be gathered as follows-

Year/Firm	Alfloo	Bzygoo	Czechy	Drjbna	Elavalaki		Total (crores)
2009	1	–	–	–	–	–	1
2010	2	–	–	–	1	1	3
2011	3	–	–	1	2	3	6/7
2012	4/5	1	–	2	3/4	5	10/11/12/13
2013	5/4	2/3	1	4	4/3	3	14/15/16/17
2014	3	3/2	2	2	2	1	10/11/12
2015	2	1	3	1	1	–	7/8
2016	1	–	2	–	–	–	3
2017	–	–	1	–	–	–	1
Total (crores)	21	7	9	10	13	13	60

The largest possible total amount of money that could have been raised in 2013 = Rs. 17 crores

28. Correct Answer:- A

Explanation:-
Given that each firm raised Rs 1 crore in its first and last year. Also, each annual increase and decrease was either of Rs 1 crore or by Rs 2 crores.
Let us consider for Alfloo,

First year of existence, 2009 = Rs 1 crore = Last year of existence, 2016
Let amount raised in 2010, 2011, 2012, 2013, 2014, 2015 be a, b, c, d, e and f respectively
Solving, 1 + a + b + c + d + e + f + 1 = 21
⇒ a + b + c + d + e + f = 19
Now, even if we consider minimum annual increase and decrease annually,
The values can be a = 2, b = 3, c = 4 or 5, d = 5 or 4, e = 3 and f = 2
Now for Bzygoo,
First year of existence, 2012 = Rs 1 crore = Last year of existence, 2015
The possibilities for the amount raised in 2013 = 2 or 3 and in 2014 = 3 or 2 respectively
Thus the total amount raised by Bzygoo = Rs 7 crores
Now for Czechy,
First year of existence, 2013 = Rs 1 crore
Total amount raised = Rs 9 crores
Now, if we consider Year 2016 as the last year of existence
The possible values of amount raised for
Year 2014 = 2 or 3, Year 2015 = 3 or 2 and Year 2016 = 1
The possible sum = Rs 7 crores (maximum)
So, the last year of existence for the firm Czechy has to be 2017 with only possible values
Year 2013 = 1, Year 2014 = 2, Year 2015 = 3, Year 2016 = 2 and Year 2017 = 1
Thus, the total amount raised = Rs 9 crores
Now for Drjbna,
First year of existence, 2011 = Rs 1 crore = Last year of existence, 2015
Total amount raised = Rs 10 crores
The only possible value of amount raised for
Year 2012 = 2, Year 2013 = 4 and Year 2014 = 2
Now for Elavalaki,
Total amount raised = Rs 13 crores
First year of existence, 2011 = Rs 1 crore but last year of existence is not given
Considering the minimum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 2, Year 2012 = 3 or 4, Year 2013 = 4 or 3, Year 2014 = 2 and Year 2015 = 1 (such that Year 2015 is the last year of existence)
Considering the maximum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 3, Year 2012 = 5, Year 2013 = 3, Year 2014 = 1 (such that Year 2014 is the last year of existence)
The rest of the information can be gathered as follows-

Year/Firm	Alfloo	Bzygoo	Czechy	Drjbna	Elavalaki		Total (crores)
2009	1	–	–	–	–	–	1
2010	2	–	–	–	1	1	3
2011	3	–	–	1	2	3	6/7
2012	4/5	1	–	2	3/4	5	10/11/12/13
2013	5/4	2/3	1	4	4/3	3	14/15/16/17
2014	3	3/2	2	2	2	1	10/11/12
2015	2	1	3	1	1	–	7/8
2016	1	–	2	–	–	–	3
2017	–	–	1	–	–	–	1
Total (crores)	21	7	9	10	13	13	60

If Elavalaki raised Rs. 3 crores in 2013, then Elavalaki raised Rs. 4 crores in 2014

Hence, the smallest possible total amount of money raised in 2012
= 4 + 1 + 2 + 4 = Rs. 11 crores

29. Correct Answer:- D

Explanation:-
Given that each firm raised Rs 1 crore in its first and last year. Also, each annual increase and decrease was either of Rs 1 crore or by Rs 2 crores.
Let us consider for Alfloo,
First year of existence, 2009 = Rs 1 crore = Last year of existence, 2016
Let amount raised in 2010, 2011, 2012, 2013, 2014, 2015 be a, b, c, d, e and f respectively
Solving, 1 + a + b + c + d + e + f + 1 = 21
⇒ a + b + c + d + e + f = 19
Now, even if we consider minimum annual increase and decrease annually,
The values can be a = 2, b = 3, c = 4 or 5, d = 5 or 4, e = 3 and f = 2
Now for Bzygoo,
First year of existence, 2012 = Rs 1 crore = Last year of existence, 2015
The possibilities for the amount raised in 2013 = 2 or 3 and in 2014 = 3 or 2 respectively
Thus the total amount raised by Bzygoo = Rs 7 crores
Now for Czechy,
First year of existence, 2013 = Rs 1 crore
Total amount raised = Rs 9 crores
Now, if we consider Year 2016 as the last year of existence
The possible values of amount raised for
Year 2014 = 2 or 3, Year 2015 = 3 or 2 and Year 2016 = 1
The possible sum = Rs 7 crores (maximum)
So, the last year of existence for the firm Czechy has to be 2017 with only possible values
Year 2013 = 1, Year 2014 = 2, Year 2015 = 3, Year 2016 = 2 and Year 2017 = 1
Thus, the total amount raised = Rs 9 crores
Now for Drjbna,
First year of existence, 2011 = Rs 1 crore = Last year of existence, 2015
Total amount raised = Rs 10 crores
The only possible value of amount raised for
Year 2012 = 2, Year 2013 = 4 and Year 2014 = 2
Now for Elavalaki,
Total amount raised = Rs 13 crores
First year of existence, 2011 = Rs 1 crore but last year of existence is not given
Considering the minimum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 2, Year 2012 = 3 or 4, Year 2013 = 4 or 3, Year 2014 = 2 and Year 2015 = 1 (such that Year 2015 is the last year of existence)
Considering the maximum amounts the possible values of amount raised for
Year 2010 = 1, Year 2011 = 3, Year 2012 = 5, Year 2013 = 3, Year 2014 = 1 (such that Year 2014 is the last year of existence)
The rest of the information can be gathered as follows-

Year/Firm	Alfloo	Bzygoo	Czechy	Drjbna	Elavalaki		Total (crores)
2009	1	–	–	–	–	–	1
2010	2	–	–	–	1	1	3
2011	3	–	–	1	2	3	6/7
2012	4/5	1	–	2	3/4	5	10/11/12/13
2013	5/4	2/3	1	4	4/3	3	14/15/16/17
2014	3	3/2	2	2	2	1	10/11/12
2015	2	1	3	1	1	–	7/8
2016	1	–	2	–	–	–	3
2017	–	–	1	–	–	–	1
Total (crores)	21	7	9	10	13	13	60

If total amount raised in 2014 = Rs. 12 crores
⇒ amount raised by Bzygoo in 2014 = Rs. 3 crores
⇒ amount raised by Bzygoo in 2013 = Rs 2 crores
Also, amount raised by Elavalaki in 2013 = Rs 3 crore or Rs 4 crores
Hence, Bzygoo raised the same amount of money as Elavalaki in 2013, it is not possible

30. Correct Answer:- A

Explanation:-
Let the total score of Day 1, Day 2, Day 3, Day 4 and Day 5 of all the participants be a, b, c, d and e respectively.
As per the Table 1,
$a + b = 15 \times 2 = 30$, $b + c = 15.5 \times 2 = 31$, $c + d = 16 \times 2 = 32$ and $d + e = 17 \times 2 = 34$
Point 2, total score on Day 3 = total score on Day 4
⇒ c = d = 16 (each)
⇒ e = 34 – 16 = 18, b = 31 – 16 = 15 and a = 30 – 15 = 15
Point 1, Chatur score on any day = 3, 6 or 9
The only possibility of his Day 2 score being unique highest = 9
His only minimum score on Day 1 = 3
⇒ Chatur's score on Day 3, Day 4 and Day 5 = 6 (each)
Also, Akhil's Day 4 score = Chatur's Day 1 score = 3
⇒ Bimal's Day 4 score = 16 – (3 + 6) = 7
Now being same rank,
Akhil's Day 3 score = Bimal's Day 3 score = 5 (each)
Point 3, Bimal's Day 1 score = Bimal's Day 3 score = 5
⇒ Akhil's Day 1 score = 15 – (5 + 3) = 7
Now for Day 2, let the score of Akhil = p and Bimal = q
Solving, p + q + 9 = 15 ⇒ p + q = 6
Since, the rank of Akhil is 2 and Bimal is 3
Possible values of p = 4 or 5 and q = 2 or 1
Now for Day 5, let the score of Akhil = x and Bimal = y
Solving, x + y + 6 = 18 ⇒ x + y = 12
Since, the rank of Akhil is 3 and Bimal is 1
Possible value of x = 5 or 4 and y = 7 or 8
(y cannot be 9 as that being unique highest)
The rest of the information can be gathered as follows-

	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Akhil	7	4/5	5	3	5/4	23/24/ 25
Bimal	5	2/1	5	7	7/8	27/26/25
Chatur	3	9	6	6	6	30
Total	15	15	16	16	18	80

Akhil's score on Day 1 = 7

31. Correct Answer:- D

Explanation:-
Let the total score of Day 1, Day 2, Day 3, Day 4 and Day 5 of all the participants be a, b, c, d and e respectively.
As per the Table 1,
$a + b = 15 \times 2 = 30$, $b + c = 15.5 \times 2 = 31$, $c + d = 16 \times 2 = 32$ and $d + e = 17 \times 2 = 34$
Point 2, total score on Day 3 = total score on Day 4
$\Rightarrow c = d = 16$ (each)
$\Rightarrow e = 34 - 16 = 18$, $b = 31 - 16 = 15$ and $a = 30 - 15 = 15$
Point 1, Chatur score on any day = 3, 6 or 9
The only possibility of his Day 2 score being unique highest = 9
His only minimum score on Day 1 = 3
$\Rightarrow$ Chatur's score on Day 3, Day 4 and Day 5 = 6 (each)
Also, Akhil's Day 4 score = Chatur's Day 1 score = 3
$\Rightarrow$ Bimal's Day 4 score = $16 - (3 + 6) = 7$
Now being same rank,
Akhil's Day 3 score = Bimal's Day 3 score = 5 (each)
Point 3, Bimal's Day 1 score = Bimal's Day 3 score = 5
$\Rightarrow$ Akhil's Day 1 score = $15 - (5 + 3) = 7$
Now for Day 2, let the score of Akhil = p and Bimal = q
Solving, $p + q + 9 = 15 \Rightarrow p + q = 6$
Since, the rank of Akhil is 2 and Bimal is 3
Possible values of p = 4 or 5 and q = 2 or 1
Now for Day 5, let the score of Akhil = x and Bimal = y
Solving, $x + y + 6 = 18 \Rightarrow x + y = 12$
Since, the rank of Akhil is 3 and Bimal is 1
Possible value of x = 5 or 4 and y = 7 or 8
(y cannot be 9 as that being unique highest)
The rest of the information can be gathered as follows-

	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Akhil	7	4/5	5	3	5/4	23/24/ 25
Bimal	5	2/1	5	7	7/8	27/26/25
Chatur	3	9	6	6	6	30
Total	15	15	16	16	18	80

Chatur attains the maximum possible score

32. Correct Answer:- 25

Explanation:-
Let the total score of Day 1, Day 2, Day 3, Day 4 and Day 5 of all the participants be a, b, c, d and e respectively.
As per the Table 1,
$a + b = 15 \times 2 = 30$, $b + c = 15.5 \times 2 = 31$, $c + d = 16 \times 2 = 32$ and $d + e = 17 \times 2 = 34$
Point 2, total score on Day 3 = total score on Day 4
$\Rightarrow c = d = 16$ (each)
$\Rightarrow e = 34 - 16 = 18$, $b = 31 - 16 = 15$ and $a = 30 - 15 = 15$
Point 1, Chatur score on any day = 3, 6 or 9
The only possibility of his Day 2 score being unique highest = 9
His only minimum score on Day 1 = 3
$\Rightarrow$ Chatur's score on Day 3, Day 4 and Day 5 = 6 (each)
Also, Akhil's Day 4 score = Chatur's Day 1 score = 3
$\Rightarrow$ Bimal's Day 4 score = $16 - (3 + 6) = 7$
Now being same rank,
Akhil's Day 3 score = Bimal's Day 3 score = 5 (each)
Point 3, Bimal's Day 1 score = Bimal's Day 3 score = 5
$\Rightarrow$ Akhil's Day 1 score = $15 - (5 + 3) = 7$
Now for Day 2, let the score of Akhil = p and Bimal = q
Solving, $p + q + 9 = 15 \Rightarrow p + q = 6$
Since, the rank of Akhil is 2 and Bimal is 3
Possible values of p = 4 or 5 and q = 2 or 1
Now for Day 5, let the score of Akhil = x and Bimal = y
Solving, $x + y + 6 = 18 \Rightarrow x + y = 12$
Since, the rank of Akhil is 3 and Bimal is 1
Possible value of x = 5 or 4 and y = 7 or 8
(y cannot be 9 as that being unique highest)
The rest of the information can be gathered as follows-

	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Akhil	7	4/5	5	3	5/4	23/24/ 25
Bimal	5	2/1	5	7	7/8	27/26/25
Chatur	3	9	6	6	6	30
Total	15	15	16	16	18	80

The minimum possible total score of Bimal = 25

33. Correct Answer:- B

Explanation:-
Let the total score of Day 1, Day 2, Day 3, Day 4 and Day 5 of all the participants be a, b, c, d and e respectively.
As per the Table 1,
$a + b = 15 \times 2 = 30$, $b + c = 15.5 \times 2 = 31$, $c + d = 16 \times 2 = 32$ and $d + e = 17 \times 2 = 34$
Point 2, total score on Day 3 = total score on Day 4
$\Rightarrow c = d = 16$ (each)

⇒ e = 34 – 16 = 18, b = 31 – 16 = 15 and a = 30 – 15 = 15
Point 1, Chatur score on any day = 3, 6 or 9
The only possibility of his Day 2 score being unique highest = 9
His only minimum score on Day 1 = 3
⇒ Chatur's score on Day 3, Day 4 and Day 5 = 6 (each)
Also, Akhil's Day 4 score = Chatur's Day 1 score = 3
⇒ Bimal's Day 4 score = 16 – (3 + 6) = 7
Now being same rank,
Akhil's Day 3 score = Bimal's Day 3 score = 5 (each)
Point 3, Bimal's Day 1 score = Bimal's Day 3 score = 5
⇒ Akhil's Day 1 score = 15 – (5 + 3) = 7
Now for Day 2, let the score of Akhil = p and Bimal = q
Solving, p + q + 9 = 15 ⇒ p + q = 6
Since, the rank of Akhil is 2 and Bimal is 3
Possible values of p = 4 or 5 and q = 2 or 1
Now for Day 5, let the score of Akhil = x and Bimal = y
Solving, x + y + 6 = 18 ⇒ x + y = 12
Since, the rank of Akhil is 3 and Bimal is 1
Possible value of x = 5 or 4 and y = 7 or 8
(y cannot be 9 as that being unique highest)
The rest of the information can be gathered as follows-

	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Akhil	7	4/5	5	3	5/4	23/24/ 25
Bimal	5	2/1	5	7	7/8	27/26/25
Chatur	3	9	6	6	6	30
Total	15	15	16	16	18	80

If the total score of Bimal is a multiple of 3, the only possibility = 27
⇒ Bimal's Day 2 score = 2 ⇒ Akhil's Day 2 score = 4

34. Correct Answer:- 26

Explanation:-
Let the total score of Day 1, Day 2, Day 3, Day 4 and Day 5 of all the participants be a, b, c, d and e respectively.
As per the Table 1,
a + b = 15 × 2 = 30, b + c = 15.5 × 2 = 31, c + d = 16 × 2 = 32 and d + e = 17 × 2 = 34
Point 2, total score on Day 3 = total score on Day 4
⇒ c = d = 16 (each)
⇒ e = 34 – 16 = 18, b = 31 – 16 = 15 and a = 30 – 15 = 15
Point 1, Chatur score on any day = 3, 6 or 9
The only possibility of his Day 2 score being unique highest = 9
His only minimum score on Day 1 = 3
⇒ Chatur's score on Day 3, Day 4 and Day 5 = 6 (each)
Also, Akhil's Day 4 score = Chatur's Day 1 score = 3
⇒ Bimal's Day 4 score = 16 – (3 + 6) = 7

Now being same rank,
Akhil's Day 3 score = Bimal's Day 3 score = 5 (each)
Point 3, Bimal's Day 1 score = Bimal's Day 3 score = 5
⇒ Akhil's Day 1 score = 15 – (5 + 3) = 7
Now for Day 2, let the score of Akhil = p and Bimal = q
Solving, p + q + 9 = 15 ⇒ p + q = 6
Since, the rank of Akhil is 2 and Bimal is 3
Possible values of p = 4 or 5 and q = 2 or 1
Now for Day 5, let the score of Akhil = x and Bimal = y
Solving, x + y + 6 = 18 ⇒ x + y = 12
Since, the rank of Akhil is 3 and Bimal is 1
Possible value of x = 5 or 4 and y = 7 or 8
(y cannot be 9 as that being unique highest)
The rest of the information can be gathered as follows-

	Day 1	Day 2	Day 3	Day 4	Day 5	Total
Akhil	7	4/5	5	3	5/4	23/24/ 25
Bimal	5	2/1	5	7	7/8	27/26/25
Chatur	3	9	6	6	6	30
Total	15	15	16	16	18	80

If Akhil's total score = 24 ⇒ Bimal's total score = 26. Answer is 26

35. Correct Answer:- B

Explanation:-
Firstly, if all the given three conditions satisfy, the sum of number of coins in the box could be = 1 + 1 + 9 = 11, but that is not giving the average as distinct integer. Thus, either exactly one condition satisfies or exactly two conditions satisfy.
For 1st row, 2nd column box, the median number of coins is 9, so the maximum number of coins is also 9. Thus as mentioned in Table 2, two sacks have more than 5 coins and exactly one condition (iii) satisfies. So, the third sack must contain coins less than or equal to 5. Also, the average number of coins per sack in any box is a distinct integer, so the only value that satisfies the coins in third sack = 3, such that the average coins in the box = (3 + 9 + 9)/3 = 7
For 2nd row, 1st column box, given that two or more conditions satisfies, but since the median number of coins = 2, so, exactly two conditions (i and iii) satisfies. Also, only one sack contains more than 5 coins. Thus the average coins in the box = 1 + 2 + 9 = 12/3 = 4
For 3rd row, 1st column, median number of coins in the box = 8, all three sacks contains more than 5 coins and only 1 condition satisfies. So, that condition must be (iii) condition i.e. the maximum coins = 9. Also, to make average an integer, the number of coins in third sack must be 7. The average number of coins in the box = (7 + 8 + 9)/3 = 8
For 3rd row, 2nd column, two conditions satisfies and two sacks contain more than 5 coins. Thus, the conditions that satisfy must be (i) and (iii). So, the only possible average in the box = (1 + 8 + 9)/3 = 6
Now, since for each and each column the total is same, so the average is also the same. Sum of distinct integers from 1 to 9 = 45, so the sum of each row and each column = 15, which is also the average of the boxes for each row and each column. Hence, the sum of number of coins in each row and each column must be = 45

The sum for 1st row, 1st column = 45 – (12 + 36) = 9
Only possible average = (1 + 1 + 7)/3 = 3 satisfying other given conditions as well
The sum of 2nd row, 2nd column = 45 – (21 + 18) = 6
Only possible average = (1 + 2 + 3)/3 = 2 satisfying other given conditions as well
The sum of 1st row, 3rd column = 45 – (9 + 21) = 15
Only possible average = (1 + 6 + 8)/3 = 5 satisfying other given conditions as well
The sum of 2nd row, 3rd column = 45 – (12 + 6) = 27
Only possible average = (9 + 9 + 9)/3 = 9 satisfying other given conditions as well
The sum of 3rd row, 3rd column = 45 – (24 + 18) = 3
Only possible average = (1 + 1 + 1)/3 = 1 satisfying other given conditions as well
The rest of the information can be gathered as follows-

	1st column	2nd column	3rd column	Total
1st row	Sum = 1 + 1 + 7 = 9 Average = 3	Sum = 3 + 9 + 9 = 21 Average = 7	Sum = 1 + 6 + 8 = 15 Average = 5	45
2nd row	Sum = 1 + 2 + 9 = 12 Average = 4	Sum = 1 + 2 + 3 = 6 Average = 2	Sum = 9 + 9 + 9 = 27 Average = 9	45
3rd row	Sum = 7 + 8 + 9 = 24 Average = 8	Sum = 1 + 8 + 9 = 18 Average = 6	Sum = 1 + 1 + 1 = 3 Average = 1	45
Total	45	45	45	

The total number of coins in all the boxes in the 3rd row = 45

36. Correct Answer:- D

Explanation:-
Firstly, if all the given three conditions satisfy, the sum of number of coins in the box could be = 1 + 1 + 9 = 11, but that is not giving the average as distinct integer. Thus, either exactly one condition satisfies or exactly two conditions satisfy.
For 1st row, 2nd column box, the median number of coins is 9, so the maximum number of coins is also 9. Thus as mentioned in Table 2, two sacks have more than 5 coins and exactly one condition (iii) satisfies. So, the third sack must contain coins less than or equal to 5. Also, the average number of coins per sack in any box is a distinct integer, so the only value that satisfies the coins in third sack = 3, such that the average coins in the box = (3 + 9 + 9)/3 = 7
For 2nd row, 1st column box, given that two or more conditions satisfies, but since the median number of coins = 2, so, exactly two conditions (i and iii) satisfies. Also, only one sack contains more than 5 coins. Thus the average coins in the box = 1 + 2 + 9 = 12/3 = 4
For 3rd row, 1st column, median number of coins in the box = 8, all three sacks contains more than 5 coins and only 1 condition satisfies. So, that condition must be (iii) condition i.e. the maximum coins = 9. Also, to make average an integer, the number of coins in third sack must be 7. The average number of coins in the box = (7 + 8 + 9)/3 = 8
For 3rd row, 2nd column, two conditions satisfies and two sacks contain more than 5 coins. Thus, the conditions that satisfy must be (i) and (iii). So, the only possible average in the box = (1 + 8 + 9)/3 = 6
Now, since for each and each column the total is same, so the average is also the same. Sum of distinct integers from 1 to 9 = 45, so the sum of each row and each column = 15, which is also the average of the boxes for each row and each column. Hence, the sum of number of coins in each row and each column must be = 45

The sum for 1st row, 1st column = 45 – (12 + 36) = 9
Only possible average = (1 + 1 + 7)/3 = 3 satisfying other given conditions as well
The sum of 2nd row, 2nd column = 45 – (21 + 18) = 6
Only possible average = (1 + 2 + 3)/3 = 2 satisfying other given conditions as well
The sum of 1st row, 3rd column = 45 – (9 + 21) = 15
Only possible average = (1 + 6 + 8)/3 = 5 satisfying other given conditions as well
The sum of 2nd row, 3rd column = 45 – (12 + 6) = 27
Only possible average = (9 + 9 + 9)/3 = 9 satisfying other given conditions as well
The sum of 3rd row, 3rd column = 45 – (24 + 18) = 3
Only possible average = (1 + 1 + 1)/3 = 1 satisfying other given conditions as well
The rest of the information can be gathered as follows-

	1st column	2nd column	3rd column	Total
1st row	Sum = 1 + 1 + 7 = 9 Average = 3	Sum = 3 + 9 + 9 = 21 Average = 7	Sum = 1 + 6 + 8 = 15 Average = 5	45
2nd row	Sum = 1 + 2 + 9 = 12 Average = 4	Sum = 1 + 2 + 3 = 6 Average = 2	Sum = 9 + 9 + 9 = 27 Average = 9	45
3rd row	Sum = 7 + 8 + 9 = 24 Average = 8	Sum = 1 + 8 + 9 = 18 Average = 6	Sum = 1 + 1 + 1 = 3 Average = 1	45
Total	45	45	45	

The boxes having at least one sack containing 9 coins = 5
(1st row, 2nd column), (2nd row, 1st column), (2nd row, 3rd column), (3rd row, 1st column) and (3rd row, 2nd column)

37. Correct Answer:- 4

Explanation:-
Firstly, if all the given three conditions satisfy, the sum of number of coins in the box could be = 1 + 1 + 9 = 11, but that is not giving the average as distinct integer. Thus, either exactly one condition satisfies or exactly two conditions satisfy.
For 1st row, 2nd column box, the median number of coins is 9, so the maximum number of coins is also 9. Thus as mentioned in Table 2, two sacks have more than 5 coins and exactly one condition (iii) satisfies. So, the third sack must contain coins less than or equal to 5. Also, the average number of coins per sack in any box is a distinct integer, so the only value that satisfies the coins in third sack = 3, such that the average coins in the box = (3 + 9 + 9)/3 = 7
For 2nd row, 1st column box, given that two or more conditions satisfies, but since the median number of coins = 2, so, exactly two conditions (i and iii) satisfies. Also, only one sack contains more than 5 coins. Thus the average coins in the box = 1 + 2 + 9 = 12/3 = 4
For 3rd row, 1st column, median number of coins in the box = 8, all three sacks contains more than 5 coins and only 1 condition satisfies. So, that condition must be (iii) condition i.e. the maximum coins = 9. Also, to make average an integer, the number of coins in third sack must be 7. The average number of coins in the box = (7 + 8 + 9)/3 = 8
For 3rd row, 2nd column, two conditions satisfies and two sacks contain more than 5 coins. Thus, the conditions that satisfy must be (i) and (iii). So, the only possible average in the box = (1 + 8 + 9)/3 = 6

Now, since for each and each column the total is same, so the average is also the same. Sum of distinct integers from 1 to 9 = 45, so the sum of each row and each column = 15, which is also the average of the boxes for each row and each column. Hence, the sum of number of coins in each row and each column must be = 45
The sum for 1st row, 1st column = 45 – (12 + 36) = 9
Only possible average = (1 + 1 + 7)/3 = 3 satisfying other given conditions as well
The sum of 2nd row, 2nd column = 45 – (21 + 18) = 6
Only possible average = (1 + 2 + 3)/3 = 2 satisfying other given conditions as well
The sum of 1st row, 3rd column = 45 – (9 + 21) = 15
Only possible average = (1 + 6 + 8)/3 = 5 satisfying other given conditions as well
The sum of 2nd row, 3rd column = 45 – (12 + 6) = 27
Only possible average = (9 + 9 + 9)/3 = 9 satisfying other given conditions as well
The sum of 3rd row, 3rd column = 45 – (24 + 18) = 3
Only possible average = (1 + 1 + 1)/3 = 1 satisfying other given conditions as well
The rest of the information can be gathered as follows-

	1st column	2nd column	3rd column	Total
1st row	Sum = 1 + 1 + 7 = 9 Average = 3	Sum = 3 + 9 + 9 = 21 Average = 7	Sum = 1 + 6 + 8 = 15 Average = 5	45
2nd row	Sum = 1 + 2 + 9 = 12 Average = 4	Sum = 1 + 2 + 3 = 6 Average = 2	Sum = 9 + 9 + 9 = 27 Average = 9	45
3rd row	Sum = 7 + 8 + 9 = 24 Average = 8	Sum = 1 + 8 + 9 = 18 Average = 6	Sum = 1 + 1 + 1 = 3 Average = 1	45
Total	45	45	45	

38. Correct Answer:- 9

Explanation:-
Firstly, if all the given three conditions satisfy, the sum of number of coins in the box could be = 1 + 1 + 9 = 11, but that is not giving the average as distinct integer. Thus, either exactly one condition satisfies or exactly two conditions satisfy.
For 1st row, 2nd column box, the median number of coins is 9, so the maximum number of coins is also 9. Thus as mentioned in Table 2, two sacks have more than 5 coins and exactly one condition (iii) satisfies. So, the third sack must contain coins less than or equal to 5. Also, the average number of coins per sack in any box is a distinct integer, so the only value that satisfies the coins in third sack = 3, such that the average coins in the box = (3 + 9 + 9)/3 = 7
For 2nd row, 1st column box, given that two or more conditions satisfies, but since the median number of coins = 2, so, exactly two conditions (i and iii) satisfies. Also, only one sack contains more than 5 coins. Thus the average coins in the box = 1 + 2 + 9 = 12/3 = 4
For 3rd row, 1st column, median number of coins in the box = 8, all three sacks contains more than 5 coins and only 1 condition satisfies. So, that condition must be (iii) condition i.e. the maximum coins = 9. Also, to make average an integer, the number of coins in third sack must be 7. The average number of coins in the box = (7 + 8 + 9)/3 = 8
For 3rd row, 2nd column, two conditions satisfies and two sacks contain more than 5 coins. Thus, the conditions that satisfy must be (i) and (iii). So, the only possible average in the box = (1 + 8 + 9)/3 = 6
Now, since for each and each column the total is same, so the average is also the same. Sum of distinct integers from 1 to 9 = 45, so the sum of each row and each column = 15, which is also

the average of the boxes for each row and each column. Hence, the sum of number of coins in each row and each column must be = 45
The sum for 1st row, 1st column = 45 – (12 + 36) = 9
Only possible average = (1 + 1 + 7)/3 = 3 satisfying other given conditions as well
The sum of 2nd row, 2nd column = 45 – (21 + 18) = 6
Only possible average = (1 + 2 + 3)/3 = 2 satisfying other given conditions as well
The sum of 1st row, 3rd column = 45 – (9 + 21) = 15
Only possible average = (1 + 6 + 8)/3 = 5 satisfying other given conditions as well
The sum of 2nd row, 3rd column = 45 – (12 + 6) = 27
Only possible average = (9 + 9 + 9)/3 = 9 satisfying other given conditions as well
The sum of 3rd row, 3rd column = 45 – (24 + 18) = 3
Only possible average = (1 + 1 + 1)/3 = 1 satisfying other given conditions as well
The rest of the information can be gathered as follows-

	1st column	2nd column	3rd column	Total
1st row	Sum = 1 + 1 + 7 = 9 Average = 3	Sum = 3 + 9 + 9 = 21 Average = 7	Sum = 1 + 6 + 8 = 15 Average = 5	45
2nd row	Sum = 1 + 2 + 9 = 12 Average = 4	Sum = 1 + 2 + 3 = 6 Average = 2	Sum = 9 + 9 + 9 = 27 Average = 9	45
3rd row	Sum = 7 + 8 + 9 = 24 Average = 8	Sum = 1 + 8 + 9 = 18 Average = 6	Sum = 1 + 1 + 1 = 3 Average = 1	45
Total	45	45	45	

Number of sacks having exactly one coin = 9

39. Correct Answer:- 5

Explanation:-
Firstly, if all the given three conditions satisfy, the sum of number of coins in the box could be = 1 + 1 + 9 = 11, but that is not giving the average as distinct integer. Thus, either exactly one condition satisfies or exactly two conditions satisfy.
For 1st row, 2nd column box, the median number of coins is 9, so the maximum number of coins is also 9. Thus as mentioned in Table 2, two sacks have more than 5 coins and exactly one condition (iii) satisfies. So, the third sack must contain coins less than or equal to 5. Also, the average number of coins per sack in any box is a distinct integer, so the only value that satisfies the coins in third sack = 3, such that the average coins in the box = (3 + 9 + 9)/3 = 7
For 2nd row, 1st column box, given that two or more conditions satisfies, but since the median number of coins = 2, so, exactly two conditions (i and iii) satisfies. Also, only one sack contains more than 5 coins. Thus the average coins in the box = 1 + 2 + 9 = 12/3 = 4
For 3rd row, 1st column, median number of coins in the box = 8, all three sacks contains more than 5 coins and only 1 condition satisfies. So, that condition must be (iii) condition i.e. the maximum coins = 9. Also, to make average an integer, the number of coins in third sack must be 7. The average number of coins in the box = (7 + 8 + 9)/3 = 8
For 3rd row, 2nd column, two conditions satisfies and two sacks contain more than 5 coins. Thus, the conditions that satisfy must be (i) and (iii). So, the only possible average in the box = (1 + 8 + 9)/3 = 6

Now, since for each and each column the total is same, so the average is also the same. Sum of distinct integers from 1 to 9 = 45, so the sum of each row and each column = 15, which is also the average of the boxes for each row and each column. Hence, the sum of number of coins in each row and each column must be = 45
The sum for 1st row, 1st column = 45 – (12 + 36) = 9
Only possible average = (1 + 1 + 7)/3 = 3 satisfying other given conditions as well
The sum of 2nd row, 2nd column = 45 – (21 + 18) = 6
Only possible average = (1 + 2 + 3)/3 = 2 satisfying other given conditions as well
The sum of 1st row, 3rd column = 45 – (9 + 21) = 15
Only possible average = (1 + 6 + 8)/3 = 5 satisfying other given conditions as well
The sum of 2nd row, 3rd column = 45 – (12 + 6) = 27
Only possible average = (9 + 9 + 9)/3 = 9 satisfying other given conditions as well
The sum of 3rd row, 3rd column = 45 – (24 + 18) = 3
Only possible average = (1 + 1 + 1)/3 = 1 satisfying other given conditions as well
The rest of the information can be gathered as follows-

	1st column	2nd column	3rd column	Total
1st row	Sum = 1 + 1 + 7 = 9 Average = 3	Sum = 3 + 9 + 9 = 21 Average = 7	Sum = 1 + 6 + 8 = 15 Average = 5	45
2nd row	Sum = 1 + 2 + 9 = 12 Average = 4	Sum = 1 + 2 + 3 = 6 Average = 2	Sum = 9 + 9 + 9 = 27 Average = 9	45
3rd row	Sum = 7 + 8 + 9 = 24 Average = 8	Sum = 1 + 8 + 9 = 18 Average = 6	Sum = 1 + 1 + 1 = 3 Average = 1	45
Total	45	45	45	

Number of boxes having all three sacks contain different number of coins = 5
(1st row, 3rd column), (2nd row, 1st column), (2nd row, 2nd column), (3rd row, 1st column) and (3rd row, 2nd column)

40. Correct Answer:- C

Explanation:-
Since the time slot varies for different visitors as well as rides, so let's arrange the data with respect to rides vs visitors and fill the time slot and corresponding spending accordingly.
From point 1, Chitra spend Rs 50 and completed her rides by 11 am without any wait, so she must have taken 2 rides Ride-1 (Rs 20) and Ride-3 (Rs 30)
From point 2, Anjali took Ride-1 at 11 am after waiting for Chitra to complete, so Chitra took Ride-3 from 9 am to 10 am and Ride-1 from 10 am to 11 am respectively
From point 3, Bipasha first of three rides is from 11:30 am to 12:30 pm
Also, by 12:15 pm, all three have spent same amount = Rs 50 each (same as Chitra's complete spending by 11 am)
So, Bipasha's ride from 11:30 am to 12:30 am must be Ride 2 amounting Rs 50
Also, Anjali's second ride must be Ride-3 from 12 pm to 1 pm (without any wait and total spending of Rs 50 by 12:15 pm)
Also, Bipasha's other two rides cannot be Ride-3 as it should be completed by 1 pm
From point 4, the last ride taken by Anjali and Bipasha was the same
Let's say Anjali's last ride was Ride-4 from 1 pm to 2 pm just after Ride-3 taken from 12 pm to 1 pm as Anjali never took a break mentioned

So, for Bipasha's last ride, she could have reached 1:30 pm and taken the Ride-4 from 2 pm to 3 pm after 30 mins wait for Anjali
So, Bipasha's second ride could be Ride-1 from 12:30 pm to 1:30 pm
But that is not possible as she took a 1-hour coffee break after completing her second ride.
Thus, this is only possible if Anjali took Ride-2 from 1 pm to 2 pm and her last ride is Ride-4 from 2 pm to 3 pm respectively
Such that Bipasha's second ride is Ride-1 from 12:30 pm to 1:30 pm and then 1-hour coffee break from 1:30 pm to 2:30 pm and then 30 min wait for Anjali from 2:30 pm to 3 pm and finally the last ride, Ride-4 from 3 pm to 4 pm
The rest of the information can be gathered as follows-

Ride	Price (Rs)	Anjali	Bipasha	Chitra
Ride-1	20	11 am to 12 pm	12:30 pm to 1:30 pm	10 am to 11 am
Ride-2	50	1 pm to 2 pm	11:30 am to 12:30 pm	–
Ride-3	30	12 pm to 1 pm	–	9 am to 10 am
Ride-4	40	2 pm to 3 pm	3 pm to 4 pm	–
Total Spending		Rs 140	Rs 110	Rs 50

The total amount spent on tickets by Bipasha = Rs 110

41. Correct Answer:- C

Explanation:-
Since the time slot varies for different visitors as well as rides, so let's arrange the data with respect to rides vs visitors and fill the time slot and corresponding spending accordingly.
From point 1, Chitra spend Rs 50 and completed her rides by 11 am without any wait, so she must have taken 2 rides Ride-1 (Rs 20) and Ride-3 (Rs 30)
From point 2, Anjali took Ride-1 at 11 am after waiting for Chitra to complete, so Chitra took Ride-3 from 9 am to 10 am and Ride-1 from 10 am to 11 am respectively
From point 3, Bipasha first of three rides is from 11:30 am to 12:30 pm
Also, by 12:15 pm, all three have spent same amount = Rs 50 each (same as Chitra's complete spending by 11 am)
So, Bipasha's ride from 11:30 am to 12:30 am must be Ride 2 amounting Rs 50
Also, Anjali's second ride must be Ride-3 from 12 pm to 1 pm (without any wait and total spending of Rs 50 by 12:15 pm)
Also, Bipasha's other two rides cannot be Ride-3 as it should be completed by 1 pm
From point 4, the last ride taken by Anjali and Bipasha was the same
Let's say Anjali's last ride was Ride-4 from 1 pm to 2 pm just after Ride-3 taken from 12 pm to 1 pm as Anjali never took a break mentioned
So, for Bipasha's last ride, she could have reached 1:30 pm and taken the Ride-4 from 2 pm to 3 pm after 30 mins wait for Anjali
So, Bipasha's second ride could be Ride-1 from 12:30 pm to 1:30 pm
But that is not possible as she took a 1-hour coffee break after completing her second ride.
Thus, this is only possible if Anjali took Ride-2 from 1 pm to 2 pm and her last ride is Ride-4 from 2 pm to 3 pm respectively

Such that Bipasha's second ride is Ride-1 from 12:30 pm to 1:30 pm and then 1-hour coffee break from 1:30 pm to 2:30 pm and then 30 min wait for Anjali from 2:30 pm to 3 pm and finally the last ride, Ride-4 from 3 pm to 4 pm
The rest of the information can be gathered as follows-

Ride	Price (Rs)	Anjali	Bipasha	Chitra
Ride-1	20	11 am to 12 pm	12:30 pm to 1:30 pm	10 am to 11 am
Ride-2	50	1 pm to 2 pm	11:30 am to 12:30 pm	–
Ride-3	30	12 pm to 1 pm	–	9 am to 10 am
Ride-4	40	2 pm to 3 pm	3 pm to 4 pm	–
Total Spending		Rs 140	Rs 110	Rs 50

42. Correct Answer:- D

Explanation:-
Since the time slot varies for different visitors as well as rides, so let's arrange the data with respect to rides vs visitors and fill the time slot and corresponding spending accordingly.
From point 1, Chitra spend Rs 50 and completed her rides by 11 am without any wait, so she must have taken 2 rides Ride-1 (Rs 20) and Ride-3 (Rs 30)
From point 2, Anjali took Ride-1 at 11 am after waiting for Chitra to complete, so Chitra took Ride-3 from 9 am to 10 am and Ride-1 from 10 am to 11 am respectively
From point 3, Bipasha first of three rides is from 11:30 am to 12:30 pm
Also, by 12:15 pm, all three have spent same amount = Rs 50 each (same as Chitra's complete spending by 11 am)
So, Bipasha's ride from 11:30 am to 12:30 am must be Ride 2 amounting Rs 50
Also, Anjali's second ride must be Ride-3 from 12 pm to 1 pm (without any wait and total spending of Rs 50 by 12:15 pm)
Also, Bipasha's other two rides cannot be Ride-3 as it should be completed by 1 pm
From point 4, the last ride taken by Anjali and Bipasha was the same
Let's say Anjali's last ride was Ride-4 from 1 pm to 2 pm just after Ride-3 taken from 12 pm to 1 pm as Anjali never took a break mentioned
So, for Bipasha's last ride, she could have reached 1:30 pm and taken the Ride-4 from 2 pm to 3 pm after 30 mins wait for Anjali
So, Bipasha's second ride could be Ride-1 from 12:30 pm to 1:30 pm
But that is not possible as she took a 1-hour coffee break after completing her second ride.
Thus, this is only possible if Anjali took Ride-2 from 1 pm to 2 pm and her last ride is Ride-4 from 2 pm to 3 pm respectively
Such that Bipasha's second ride is Ride-1 from 12:30 pm to 1:30 pm and then 1-hour coffee break from 1:30 pm to 2:30 pm and then 30 min wait for Anjali from 2:30 pm to 3 pm and finally the last ride, Ride-4 from 3 pm to 4 pm
The rest of the information can be gathered as follows-

Ride	Price (Rs)	Anjali	Bipasha	Chitra
Ride-1	20	11 am to 12 pm	12:30 pm to 1:30 pm	10 am to 11 am
Ride-2	50	1 pm to 2 pm	11:30 am to 12:30 pm	–
Ride-3	30	12 pm to 1 pm	–	9 am to 10 am
Ride-4	40	2 pm to 3 pm	3 pm to 4 pm	–
Total Spending		Rs 140	Rs 110	Rs 50

Ride-1 was taken by all three visitors

43. Correct Answer:- 6

Explanation:-
Since the time slot varies for different visitors as well as rides, so let's arrange the data with respect to rides vs visitors and fill the time slot and corresponding spending accordingly.
From point 1, Chitra spend Rs 50 and completed her rides by 11 am without any wait, so she must have taken 2 rides Ride-1 (Rs 20) and Ride-3 (Rs 30)
From point 2, Anjali took Ride-1 at 11 am after waiting for Chitra to complete, so Chitra took Ride-3 from 9 am to 10 am and Ride-1 from 10 am to 11 am respectively
From point 3, Bipasha first of three rides is from 11:30 am to 12:30 pm
Also, by 12:15 pm, all three have spent same amount = Rs 50 each (same as Chitra's complete spending by 11 am)
So, Bipasha's ride from 11:30 am to 12:30 am must be Ride 2 amounting Rs 50
Also, Anjali's second ride must be Ride-3 from 12 pm to 1 pm (without any wait and total spending of Rs 50 by 12:15 pm)
Also, Bipasha's other two rides cannot be Ride-3 as it should be completed by 1 pm
From point 4, the last ride taken by Anjali and Bipasha was the same
Let's say Anjali's last ride was Ride-4 from 1 pm to 2 pm just after Ride-3 taken from 12 pm to 1 pm as Anjali never took a break mentioned
So, for Bipasha's last ride, she could have reached 1:30 pm and taken the Ride-4 from 2 pm to 3 pm after 30 mins wait for Anjali
So, Bipasha's second ride could be Ride-1 from 12:30 pm to 1:30 pm
But that is not possible as she took a 1-hour coffee break after completing her second ride.
Thus, this is only possible if Anjali took Ride-2 from 1 pm to 2 pm and her last ride is Ride-4 from 2 pm to 3 pm respectively
Such that Bipasha's second ride is Ride-1 from 12:30 pm to 1:30 pm and then 1-hour coffee break from 1:30 pm to 2:30 pm and then 30 min wait for Anjali from 2:30 pm to 3 pm and finally the last ride, Ride-4 from 3 pm to 4 pm
The rest of the information can be gathered as follows-

Ride	Price (Rs)	Anjali	Bipasha	Chitra
Ride-1	20	11 am to 12 pm	12:30 pm to 1:30 pm	10 am to 11 am
Ride-2	50	1 pm to 2 pm	11:30 am to 12:30 pm	–
Ride-3	30	12 pm to 1 pm	–	9 am to 10 am
Ride-4	40	2 pm to 3 pm	3 pm to 4 pm	–
Total Spending		Rs 140	Rs 110	Rs 50

Total rides taken by Anjali and Chitra = 4 + 2 = 6

44. Correct Answer:- 140

Explanation:-
Since the time slot varies for different visitors as well as rides, so let's arrange the data with respect to rides vs visitors and fill the time slot and corresponding spending accordingly.
From point 1, Chitra spend Rs 50 and completed her rides by 11 am without any wait, so she must have taken 2 rides Ride-1 (Rs 20) and Ride-3 (Rs 30)
From point 2, Anjali took Ride-1 at 11 am after waiting for Chitra to complete, so Chitra took Ride-3 from 9 am to 10 am and Ride-1 from 10 am to 11 am respectively
From point 3, Bipasha first of three rides is from 11:30 am to 12:30 pm
Also, by 12:15 pm, all three have spent same amount = Rs 50 each (same as Chitra's complete spending by 11 am)
So, Bipasha's ride from 11:30 am to 12:30 am must be Ride 2 amounting Rs 50
Also, Anjali's second ride must be Ride-3 from 12 pm to 1 pm (without any wait and total spending of Rs 50 by 12:15 pm)
Also, Bipasha's other two rides cannot be Ride-3 as it should be completed by 1 pm
From point 4, the last ride taken by Anjali and Bipasha was the same
Let's say Anjali's last ride was Ride-4 from 1 pm to 2 pm just after Ride-3 taken from 12 pm to 1 pm as Anjali never took a break mentioned
So, for Bipasha's last ride, she could have reached 1:30 pm and taken the Ride-4 from 2 pm to 3 pm after 30 mins wait for Anjali
So, Bipasha's second ride could be Ride-1 from 12:30 pm to 1:30 pm
But that is not possible as she took a 1-hour coffee break after completing her second ride.
Thus, this is only possible if Anjali took Ride-2 from 1 pm to 2 pm and her last ride is Ride-4 from 2 pm to 3 pm respectively
Such that Bipasha's second ride is Ride-1 from 12:30 pm to 1:30 pm and then 1-hour coffee break from 1:30 pm to 2:30 pm and then 30 min wait for Anjali from 2:30 pm to 3 pm and finally the last ride, Ride-4 from 3 pm to 4 pm
The rest of the information can be gathered as follows-

Ride	Price (Rs)	Anjali	Bipasha	Chitra
Ride-1	20	11 am to 12 pm	12:30 pm to 1:30 pm	10 am to 11 am
Ride-2	50	1 pm to 2 pm	11:30 am to 12:30 pm	–
Ride-3	30	12 pm to 1 pm	–	9 am to 10 am
Ride-4	40	2 pm to 3 pm	3 pm to 4 pm	–
Total Spending		Rs 140	Rs 110	Rs 50

The total amount spent by Anjali = Rs 140

Quant

1. Correct Answer:- C

Explanation:-

$$\frac{x}{y} < \frac{x+3}{y-3}$$

$$\Rightarrow \frac{x}{y} - \frac{x+3}{y-3} < 0$$

$$\Rightarrow \frac{-3(x+y)}{y(y-3)} < 0 \Rightarrow \frac{x+y}{y(y-3)} > 0 \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Three cases arise:
Case 1: When $y < 0$ then y & y - 3 both are negative
From (1), $x + y > 0$
So, when $y < 0$ then $y > -x$
which is correct
Case 2: When $0 < y < 3$ then $y > 0$ but $y - 3 < 0$
So, from (1), $x + y < 0$
So, when $0 < y < 3$ then $x + y < 0$
Case 3: When $y > 3$, then both $y > 0$ and $y - 3 > 0$
So, from (1), $x + y > 0$
So, when $y > 3$ then $x + y > 0$

2. Correct Answer:- D

Explanation:-
Since k divides (m + 2n), k must also divides (2m + 4n)
Also, k divides (3m + 4n) => k divides (m + 2m + 4n)
So, k must divide m as well
Again k divides (m + 2n), k must also divides (3m + 6n)
Also, k divides (3m + 4n) => k divides (3m + 6n – 2n)
So, k must divide 2n as well
Hence, k must be a common divisor of m and 2n

3. Correct Answer:- C

Explanation:-
Given equation can be written as

Given equation can be written as

$$\left(2^{2x^2}\right)^2 - 2 \cdot 2^{2x^2} \cdot 2^{x+15} + \left(2^{x+15}\right)^2 = 0 \quad \ldots\ldots\ldots\ldots (1)$$

As we know, $(a - b)^2 = a^2 - 2ab + b^2$

So the above equation reduces to

$$\left(2^{2x^2} - 2^{x+15}\right)^2 = 0$$

$\Rightarrow 2^{2x^2} = 2^{x+15}$

$\Rightarrow 2x^2 = x + 15$

$\Rightarrow 2x^2 - x - 15 = 0$

$\Rightarrow 2x^2 - 6x + 5x - 15 = 0$

$\Rightarrow (2x + 5)(x - 3) = 0$

$\Rightarrow x = -5/2$ or 3

Required sum = $-5/2 + 3 = 1/2$

4. Correct Answer:- C

Explanation:-

$a^m \times b^n = 144^{145} = (2^4 \times 3^2)145 = 2^{580} \times 3^{290}$

$\Rightarrow a^m \times b^n = (3^{290})1 \times 2^{580}$

To maximise (n – m), n has to be maximum and m has to be minimum

The maximum possible value of n = 580 when b = 2 and the minimum possible value of m = 1 when $a = 3^{290}$

Hence, maximum value of (n – m) = 580 – 1 = 579

5. Correct Answer:- 6

Explanation:-

$(x – 1)^2 + 2kx + 11 = 0$

$\Rightarrow x^2 – 2x + 1 + 2kx + 11 = 0$

$\Rightarrow x^2 + x (2k – 2) + 12 = 0$

Since roots are not real,

$\Rightarrow (2k – 2)2 – 4 \times 1 \times 12 < 0$

$\Rightarrow 4k^2 + 4 – 8k – 48 < 0$

$\Rightarrow 4k^2 – 8k – 44 < 0$

$\Rightarrow k^2 – 2k – 11 < 0$

$\Rightarrow k^2 – 2k + 1 – 12 < 0$

$\Rightarrow (k – 1)2 < 12$

So, the largest integral value of k = 4 which satisfies the above inequality

Now, since k and y are positive numbers, AM ≥ GM

$$\text{So, } \frac{\frac{k}{4y} + 9y}{2} \geq \sqrt{\frac{k}{4y} \cdot 9y}$$

$$\Rightarrow \frac{k}{4y} + 9y \geq 2\sqrt{\frac{9k}{4}}$$

$$\Rightarrow \frac{k}{4y} + 9y \geq 3\sqrt{k}$$

$$\text{Now } k = 4, \text{ So, } \frac{k}{4y} + 9y \geq 3\sqrt{4} \text{ i.e. } 6$$

Hence, the required answer is 6

6. Correct Answer:- 15

Explanation:-
Since the required number has exactly 4 factors
So, the number should be either in the form of p3 or p × q, where p and q are prime numbers
For p3 , possible numbers < 50 are 23 and 33, 2 such numbers are possible
For p ×q, possible numbers < 50 are 2 × 3, 2 × 5, 2 × 7, 2 × 11, 2 × 13, 2 × 17, 2 × 19, 2 × 23, 3 × 5, 3 × 7, 3 × 11, 3 × 13, 5 × 7, 13 such numbers are there
Hence, in total, there are 15 such numbers

7. Correct Answer:- 7

Explanation:-

$$\text{Given } \log_{\sqrt{3}} x + \frac{\log_x 5^4}{\log_x 5^{-3}} = \frac{16}{3} \text{ (because } 5^2 = 25 \text{ and } 0.008 = 5^{-3})$$

$$\Rightarrow 2\log_3 x + \frac{2\log_x 5}{(-3)\log_x 5} = \frac{16}{3}$$

$$\Rightarrow 2\log_3 x = \frac{16}{3} + \frac{2}{3} = 6$$

$$\Rightarrow \log_3 x = 3 \Rightarrow x = 27$$

$$\text{Now, } \log_3 (3x^2) = \log_3 3 \times 27 \times 27 = \log_3 3^7$$

$$\Rightarrow x = 7$$

8. Correct Answer:- D

Explanation:-
Let time taken by inlet pipe A = a hrs.
Then time taken by outlet pipe B = (a - 1) hrs.
Then time taken by outlet pipe C = C hrs.
When all pipes work together, tank gets filled in 2 hrs.

So, $\frac{1}{a}+\frac{1}{c}-\frac{1}{a-1}=\frac{1}{2}$ ..... (1)

When B & C are turned on together and pipe B is turned off after one hour, then pipe C takes another 1. 25 hours to fill the tank.

$\frac{2.25}{C}-\frac{1}{a-1}=1\Rightarrow\frac{9}{4C}-\frac{1}{a-1}=1$ ..... (2)

Also, a < 5. Solving (1) & (2)

$\frac{9}{4}\left(\frac{1}{2}-\frac{1}{a}+\frac{1}{a-1}\right)-\frac{1}{a-1}=1$

$\Rightarrow\frac{9}{8}-\frac{9}{4a}+\frac{9}{4(a-1)}-\frac{1}{a-1}=1$

$\Rightarrow\frac{9}{4a}-\frac{5}{4(a-1)}=\frac{1}{8}$

$\Rightarrow\frac{9}{a}-\frac{5}{a-1}=\frac{1}{2}\Rightarrow\frac{9a-9-5a}{a(a-1)}=\frac{1}{2}$

$\Rightarrow 8a - 18 = a^2 - a$

$\Rightarrow a^2 - 9a + 18 = 0 \Rightarrow a = 6, 3$ but $a < 5$

So, a = 3

Put a = 3 in (2),

$\frac{9}{4C}-\frac{1}{a-1}=1\Rightarrow\frac{9}{4C}-\frac{1}{2}=1$

$\Rightarrow\frac{9}{4C}=\frac{3}{2}$

$\Rightarrow C=\frac{3}{2}\text{hrs}=1.5\text{ hrs}=90\text{mins}.$

9. Correct Answer:- A

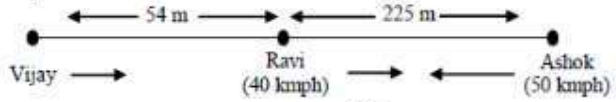
Explanation:-
Minu's profit for the 1st time selling to Kanu = 20% of 1000 = Rs 200
So, cost price for Kanu = 1000 + 200 = Rs 1200
Now, cost price for Minu for the 2nd time = 1200 - 20% of 1200 = Rs 960
Since, total profit for Minu = Rs 500, so profit for the 2nd time = 500 - 200 = Rs 300
Percenetage profit by Minu when sold to Tanu = 300/960 × 100 = 31.25%

10. Correct Answer:- B

Explanation:-
Let the total number of employee = 5x and total salary = 6y
So, number of employees in manufacturing deaprtment = 20% of 5x = x
=> number of non-manufacturing employees = 5x - x = 4x
Total salary withdrawn by manufacturing employees = 1/6 × 6y = y
Total salary withdrawn by non-manufacturing employees = 6y - y = 5y
Average salary of manufacturing employees = y/x
Average salary of non-manufacturing employees = 5y/4x
Hence, required ratio = y/x : 5y/4x = 4:5

11. Correct Answer:- A

Explanation:-



Time taken by R & A to meet $= \frac{225}{(40+50)\frac{5}{18}}$ secs

$= \frac{225}{90} \times \frac{18}{5} = 9$ secs.

That means V should meet R after 9 secs

So, speed of Ravi $= \frac{54}{(V-40)\frac{5}{18}} = 9$

$\Rightarrow V - 40 = \frac{54}{9} \times \frac{18}{5} = \frac{108}{5}$ kmph

So, $V = 40 + 21.6 = 61.6$ kmph

12. Correct Answer:- B

Explanation:-
Let price and weight of stone be P and w
So, P is directly proportional to w2
=> P = kw2 where k is a constant
Also weight of stone = 18 units and the stone is broken into four parts of distinct weights
Now, maximum possible total price of all 4 pieces would be when one of the piece has maximum possible weight
So, the weights would be 1, 2, 3 and 12
And similarly, minimum possible total price of all 4 pieces would be when the weights are as closest as possible
So, the weights would be 3, 4, 5 and 6
So, maximum price = k (12 + 22 + 32 + 122) = k (1 + 4 + 9 + 144) = 158k
and minimum price = k (32 + 42 + 52 + 62) = k (9 + 16 + 25 + 36) = 86k
Given 158k - 86 k = 72k = 288000 => k = 4000
Price of original piece = kw2 = 4000 (18)2 = Rs 1296000

13. Correct Answer:- C

Explanation:-
Given, P = Rs 200000 and R% = 8% p.a. => 4% per half year
Amount after first year

$= 200000\left(1+\frac{4}{100}\right)^2 = 216320$ Rs.

Interest paid after 1st year = Rs 10320
Outstanding amount to be paid = 216320 - 10320 = Rs 206000

Compound amount after two more years $= 206000\left(1+\frac{4}{100}\right)^4 = 240991$ Rs. (approx.)

Compound interest of last 2 years = 240991 - 200000 = Rs 40991
Compound interest paid in all 3 years = 10320 + 40991 = Rs 51311

14. Correct Answer:- 407

Explanation:-
Let the number of white shirts = x and blue shirts = y
Total CP = 1000x + 1125y
=> Total MP = 1.25 × (1000x + 1125y)
and Total SP = 0.9 × 1.25 × (1000x + 1125y) = 1.125 (1000x + 1125y)
Profit = 0.125 (1000x + 1125y) = 51000
=> 1000x + 1125y = 408000
=> 8x + 9y = 3264
=> 9y = 8 (408 - x)
So, y should be a multiple of 8
If y = 8, x = 399 => x + y = 407
If y = 16, y = 390 => x + y = 406
If y = 24, y = 381 => x + y = 405
and so on
Hence, maximum possible value of x + y = 407

Alternate approach
Let average cost of all shirts = 4a
Then average MP = 4a + 25% of 4a = 5a
Average S.P. $= 5a-\frac{10}{100}(5a)=4.5a$
Average Profit = S.P. - C.P. = 0.5a
Let the total number of shirts = n
Then n (0.5) a = 51000
⇒ an = 102000 …… (1)
Now n has to be maximized i.e. a has to be minimized i.e. 4a has to be minimized.
i.e. 4a > 1000 ⇒ a > 250
$\Rightarrow \frac{102000}{n} > 250$ .....(from (1))
⇒ n < 408
n_{max} = 407

15. Correct Answer:- 16

Explanation:-
The total amount = 352n
Also, 352n = 2 × 506 + (n - 2) y, where y ≤ 330
where y = per head money received by other people

$$\Rightarrow \frac{352n-1012}{n-2} = y$$
$$\Rightarrow \frac{352n-1012}{n-2} \le 330$$
$$\Rightarrow \frac{352n-1012-330n+660}{n-2} \le 0$$
$$\Rightarrow \frac{22n-352}{n-2} \le 0$$
$$\Rightarrow \frac{n-16}{n-2} \le 0$$
$$\Rightarrow \frac{(n-16)(n-2)}{(n-2)^2} \le 0 \Rightarrow (n-16)(n-2) \le 0$$
$$\Rightarrow 2 \le n \le 16$$

So, the maximum possible value of n = 16

16. Correct Answer:- 7

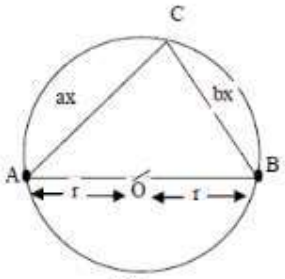
Explanation:-
The volume of milk in the container becomes less than that of water means the percentage of milk should be < 50% of the total
Every time 4 litres is removed out of 40 litres i.e. 1/10th is removed
Let the process is repeated n number of times
So, the remaining milk

$$= 1 \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} \ldots\ldots \text{n times} < \frac{1}{2}$$
$$\Rightarrow \left(\frac{9}{10}\right)^n < \frac{1}{2}$$

By trial and error, we may calculate that the smallest value of n = 7

17. Correct Answer:- C

Explanation:-
Given AC : BC = a : b
So, let us assume AC = ax, BC = bx
Since angle made in semi-circle is 90°
So, $AC^2 + BC^2 = AB^2$
$\Rightarrow (ax)^2 + (bx)^2 = (2r)^2$

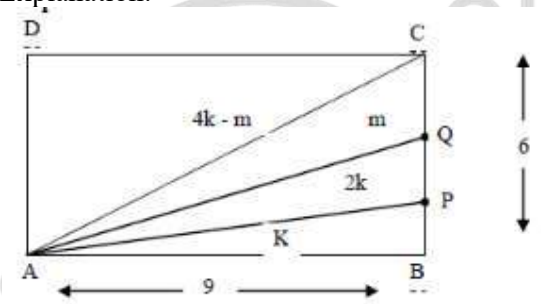


$$\Rightarrow x^2 = \frac{4r^2}{a^2+b^2}$$

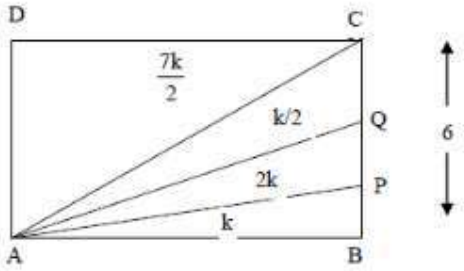
$$\text{Ar.}(\Delta ABC) = \frac{1}{2}(ax)(bx) = \frac{1}{2}(abx^2) = \frac{1}{2}ab\left(\frac{4r^2}{a^2+b^2}\right) = \frac{2abr^2}{a^2+b^2}$$

18. Correct Answer:- B

Explanation:-



Let the area of triangle ABP = k
=> area of AQCD = 4 (Area of ABP) = 4k
Now area (ABP), area (APQ) and area (AQCD) are in GP
=> k, ?, 4k are in GP
=> area (APQ) = 2k
Let area (AQC) = m
Also, area (ADC) = 4k - m = half of the rectangle
= area (ACB) = 3k + m
=> 4k - m = 3k + m
=> k = 2m
Now the rectangle looks like



Now Area (APB) : Area (AQP) : Area (ACQ)

$= \frac{1}{2} AB \cdot BP : \frac{1}{2} AB \cdot PQ : \frac{1}{2} AB \cdot CQ$

$= BP : PQ : CQ = K : 2k : \frac{k}{2} = 2 : 4 : 1$

19. Correct Answer:- 45

Explanation:-

Case 1: When x - y > 0 & x - 5 > 0

Equation becomes,

x - y - (x - 5) = 2

⇒ y = 3 where x > 5 and x > y

Case 2: When x - y < 0 and x - 5 < 0

⇒ x < y and x < 5

So, equation becomes,

- (x - y) + (x - 5) = 2

⇒ y = 7 where x < 5 and x < y

Case 3: When x - y < 0 & x - 5 > 0

⇒ x < y & x > 5

So, equation becomes

- (x - y) - (x - 5) = 2

⇒ y - 2x = - 3 ⇒ 2x - y = 3, x < y, x > 5

Case 4: When x - y > 0 and x - 5 < 0

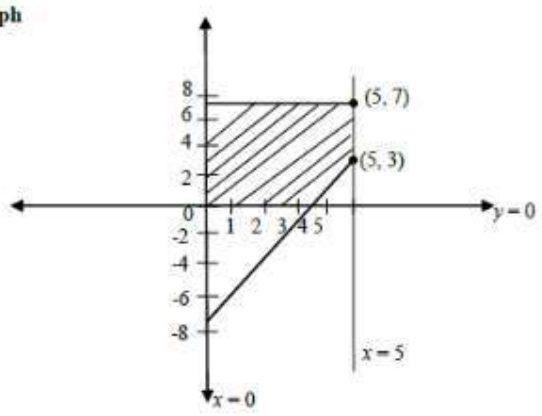
⇒ x > y and x < 5

So, equation becomes

x - y + x - 5 = 2

⇒ 2x - y = 7 where x > y and x < 5

Graph



So, we can see the required figure is a trapezium.
So required area is 1/2. (14 + 4) 5 = 45

20. Correct Answer:- A

Explanation:-
Let both the series are
a, a + q, a + 2q…… = a1, a2, a3……
and b, b + p, b + 2p …… = b1, b2, b3……
Where p & q are prime nos.
Given b2 = 0 ⇒ b + p = 0 ⇒ b = - p
So, the series becomes,
- p, 0, p, 2p, …… = bn series.
Now, b19 = - p + (19 - 1)p = 17p.
And similarly b9 = 7p
a5 = b9 = 7p & a19 = b19 = 17p
⇒ a + 4q = 7p and a + 18q = 17p
By solving both eqns, we will get $q = \frac{5}{7}p$
Since p & q are primes; So, p = 7, q = 5 & a = 29.
So, a11 = a + 10q = 29 + 10 (5) = 79

21. Correct Answer:- B

Explanation:-
Since 2 pq - 20 = 52 - 2 pq
⇒ 4pq = 72 ⇒ pq = 18
Also, $p^2 + q^2 - 29 = 2pq - 20$
⇒ $p^2 + q^2 = 36 - 20 + 29 = 45$.
Now $p^3 - q^3 = (p - q)(p2 + q2 + pq)$
= (p - q) (45 + 18) = 63 (p - q) …… (1)
Also, $p^2 + q^2 - 29 = 2pq - 20$
⇒ $p^2 + q^2 - 2pq = 9$

$\Rightarrow (p - q)^2 = 9 \Rightarrow p - q = \pm 3$…….. (2)
Combining (1) & (2),
$(p^3 - q^3)$ max = 63 × 3 = 189
$(p^3 - q^3)$ min = 63 × (- 3) = - 189
So, required difference = 189 - (- 189) = 378

22. Correct Answer:- 967

Explanation:-
$a_n = 13 + 6 (n - 1) = 6n + 7 = 7, 13, 19, 25, 31, 37, 43$….
$b_n = 15 + 7 (n - 1) = 8 + 7n = 8, 15, 22, 29, 36, 43$…..
Since, we are looking for common terms.
First common term is 43.
All the common terms should be in the form of
n(L.C.M. (6, 7)) + 43 = 42n + 43.
Now 42n + 43 < 1000
$\Rightarrow$ 42 n < 957
$\Rightarrow$ n < 22.7……
$\Rightarrow$ the largest possible value of n = 22.
So, the largest 3 digit integer = 42n + 43 = 42 (22) + 43 = 967.

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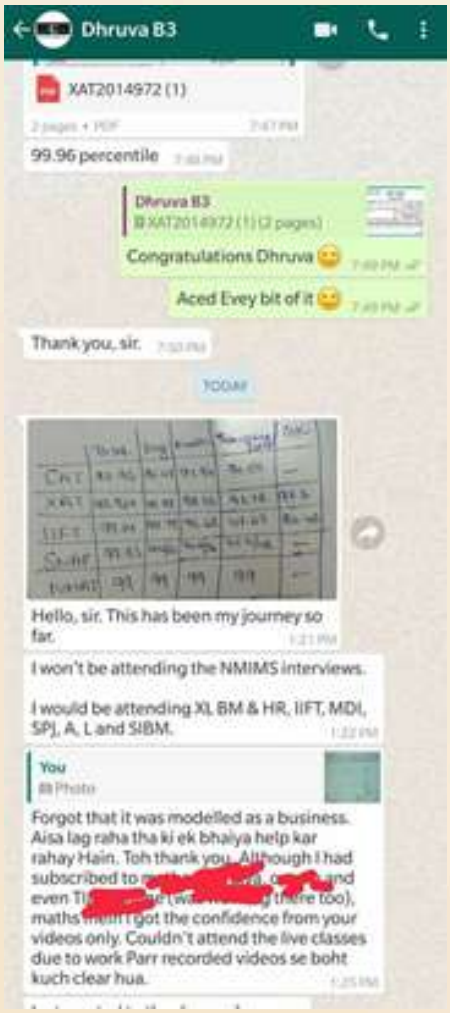

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