

Mock CAT - 07 2018

Scorecard (procreview.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:55:27 UTC 2019&qsetId=5wJ FezrFqI=&qsetName=Mock CAT - 07 2018)

Accuracy (AccSelectGraph.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:55:27 UTC 2019&qsetId=5wJ FezrFqI=&qsetName=Mock CAT - 07 2018)

Qs Analysis (QsAnalysis.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:55:27 UTC 2019&qsetId=5wJ FezrFqI=&qsetName=Mock CAT - 07 2018)

Video Attempt (VideoAnalysis.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:55:27 UTC 2019&qsetId=5wJ FezrFqI=&qsetName=Mock CAT − 07 2018)

Solutions (Solution.jsp?sid=aaa5BycB_LJvH-TdBuPHwSun Jan 20 05:55:27 UTC 2019&qsetId=5wJ FezrFqI=&qsetName=Mock CAT - 07 2018)

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

On the slope of a thickly forested Czech mountain, three men in hard hats and mud-spattered fluorescent vests dig for the metal that could power a new industrial revolution.

They watch carefully as a mobile rig, mounted on tank treads, hammers and spins a drill bit hundreds of yards into the bedrock. Water gushes from the bore as the bit punctures an underground spring.

The men are prospecting for new sources of lithium, a raw material now found primarily in China and Chile that could become as important to the auto industry as oil is now.

Faster than anyone expected, electric cars are becoming as economical and practical as cars with conventional engines. Prices for lithium-ion batteries are plummeting, while technical advances are

increasing driving ranges and cutting recharging times.

But this electric-car future is still missing some pieces. Some crucial raw materials are scarce. There are not enough places to recharge. Battery-powered cars still cost thousands of dollars more than many gasoline vehicles.

Car companies are racing to overcome these obstacles. They, and the millions of people they employ, risk becoming irrelevant.

"Many people are nervous about how fast this is coming and how much they have to invest," said Norbert Dressler, a senior partner at Roland Berger in Stuttgart, Germany, who advises the auto industry.

Here's a look at what needs to happen before electric cars take over the world.

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One reason battery costs are falling is that manufacturers are ramping up production. The greater the supply, the lower the price.

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Carmakers are racing to secure the essential ingredients in batteries like cobalt, lithium and graphite. They need to avoid shortages that would drive prices too high, making electric vehicles unaffordable.

But manufacturers are also dealing with a geopolitical dimension. Three-quarters of the world's reserves of lithium, a crucial ingredient in the most common kind of electric car battery, are in China and Chile, according to the United States Geological Survey. As demand surges, China could deploy its natural resources as a diplomatic cudgel the same way that Saudi Arabia uses oil.

The risk that a few countries could control most of the ingredients for electric car batteries is what spurred the drilling crew to the mountainside in Cinovec in the Czech Republic.

The industry is racing to invest in the future, as electric cars portend sweeping economic and societal changes. The transition will be painful for traditional carmakers and suppliers, potentially even catastrophic.

Q.1

What were those three men actually searching for?

1 Natural resources that would eventually start a new industrial revolution.

2 Sources of oil in Chile and China	
3 Sources of Lithium that would lead to the manufacture of electric c	ars.
4 To excavate the sources of raw metals in Chile and China	
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	م Answer key/Solution

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Q.2	
One particular aspect that has led to the falling of battery costs is:	
1 Olower supply of lithium.	
2 O higher demand for electric cars over petrol runs cars.	
3 orapid increase in production of batteries.	
4 O increased gap between supply and demand.	
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Q.3
All of the following highlights the problem of electric cars in the near future, except:

1 They are not cost effective.

2 They are yet to properly utilise raw materials.

3 There are not enough places to recharge.

4 This evolution will be hurting the present car makers.

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Answer key/Solution

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Q.4 Which of the following promotes an uncertainty that is linked with this project?
1 Whether this project will have a geopolitical dimension or not
2 Whether cheaper raw products will be available or not
3 O How it will affect the ecosystem.
4 O How much one has to invest is still unknown
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Q.5 The main idea of the passage is to:	
1 undervalue the pros and cons of battery run cars.	
2 Oportray the future aspect of electric cars.	
3 portray the history of electric cars which in course will take over	r fuel run cars.
$4 \bigcirc$ portray the response of the traditional car makers to the rising t	hreat of electric cars.
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FeedBack	■ Bookmark
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Q.6

All of the following can be inferred from the given passage, except:

1 Electric cars running on batteries will change the shape of the automobile industry.

2 More than half of the world's reserves of lithium	are in China and Chile.
3 Clectric cars will bring about economical and so	cietal changes.
4 Other than the battery, excavation of lithium and	d graphite is more important.
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FeedBack	■ Bookmark
	م Answer key/Solution

The conflicts arising from diversity can be mitigated if teams are effectively led. This is hardly surprising: leadership is a fundamental resource for groups and organizations. It is the psychological process that enables individuals to set aside their selfish agendas to cooperate with others for the common benefit of the team, articulating the natural tension between our desire to get ahead of others and our need to get along with others. All of this is particularly important when teams are diverse, for it will be harder for team members to see things from other members' perspectives, empathize with them, and suppress their own conscious and unconscious biases.

Most studies assume that the relationship between diversity and creativity is linear, but recent evidence suggests that a moderate degree of diversity is more beneficial than a higher dose. This finding is consistent with the too-much-of-a-good-thing paradigm in management science, which provides compelling evidence for the idea that even the most desirable qualities have a dark side if taken to the extreme. In other words, all things are good in moderation (except moderation).

Most discussions about diversity focus on demographic variables (e.g., gender, age, and race). However, the most interesting and influential aspects of diversity are psychological (e.g., personality, values, and abilities), also known as deep-level diversity. Indeed, there are several advantages to focusing on deep-level variables as opposed to demographic factors. First, whereas demographic variables perpetuate stereotypical and prejudiced characterizations, deep-level diversity focuses on the individual, allowing a much more granular understanding of human diversity. Regardless of whether you focus on bright- or dark-side personality characteristics, motives and values, or indeed creativity, group differences are trivial when compared with differences between individuals, even when the individuals are part of the same group.

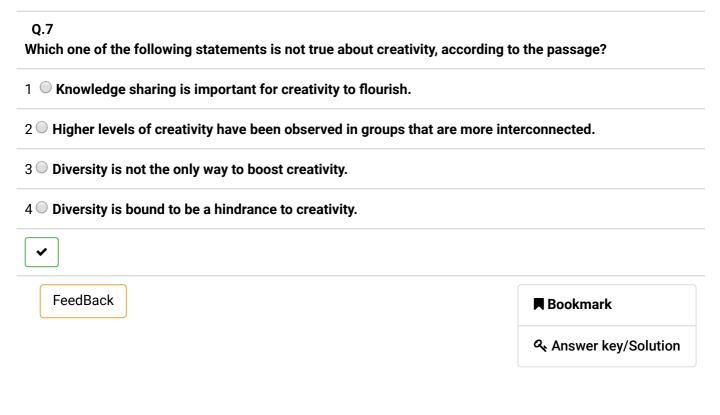
No matter how diverse the workforce is, and regardless of what type of diversity we examine, diversity will not enhance creativity unless there is a culture of sharing knowledge. Studies mapping the social networks of organizations have found higher levels of creativity in groups that are more interconnected, particularly when creative and intrapreneurial individuals are a central node in those networks.

Unlike coaching, which tends to benefit those who need it the least (those who really need it are, alas, often uncoachable), diversity training is most effective with individuals who are skeptical of it. This is encouraging, though the challenge, of course, is to ensure that people who are cynical about diversity

actually enroll in these training programs.

Other factors are much more salient. Although the question of whether diversity can foster creativity is both interesting and important, it is important to note that there are many other more influential drivers of creativity. As a seminal meta-analysis of 30 years of research showed, support for innovation, vision, task orientation, and external communication is the strongest determinant of creativity and innovation; most input variables, including team composition and structure, have much weaker effects. Likewise, developing expertise, assigning people to tasks that are meaningful and interesting, and improving creative thinking skills will produce higher gains in both individual and team creativity than focusing on diversity will. It should also be noted that a better way to promote both creativity and diversity is to select employees on the basis of their creativity, as opposed to their cognitive ability or educational credentials, for that alone would enhance the typical diversity level of organizations. In that sense, creativity may lead to diversity more than vice versa.

In short, there are probably much better reasons for creating a diverse team and organization than boosting creativity. And if your actual goal is to enhance creativity, there are simpler, more effective solutions than boosting diversity.



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

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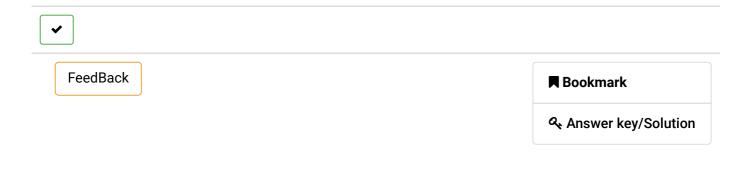
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4 boosting creativity is just one of the reasons for creating diverse teams in organizations.



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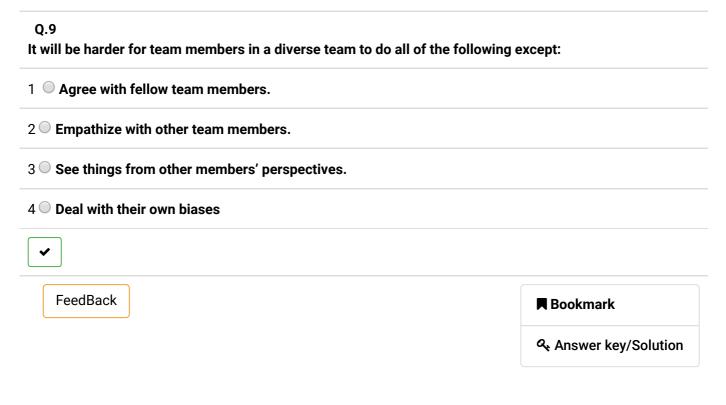
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In short, there are probably much better reasons for creating a diverse team and organization than boosting creativity. And if your actual goal is to enhance creativity, there are simpler, more effective solutions than boosting diversity.



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

The conflicts arising from diversity can be mitigated if teams are effectively led. This is hardly surprising: leadership is a fundamental resource for groups and organizations. It is the psychological process that enables individuals to set aside their selfish agendas to cooperate with others for the common benefit of the team, articulating the natural tension between our desire to get ahead of others and our need to get along with others. All of this is particularly important when teams are diverse, for it will be harder for team members to see things from other members' perspectives, empathize with them, and suppress their own conscious and unconscious biases.

Most studies assume that the relationship between diversity and creativity is linear, but recent evidence suggests that a moderate degree of diversity is more beneficial than a higher dose. This finding is consistent with the too-much-of-a-good-thing paradigm in management science, which provides compelling evidence for the idea that even the most desirable qualities have a dark side if taken to the extreme. In other words, all things are good in moderation (except moderation).

Most discussions about diversity focus on demographic variables (e.g., gender, age, and race). However, the most interesting and influential aspects of diversity are psychological (e.g., personality, values, and

abilities), also known as deep-level diversity. Indeed, there are several advantages to focusing on deep-level variables as opposed to demographic factors. First, whereas demographic variables perpetuate stereotypical and prejudiced characterizations, deep-level diversity focuses on the individual, allowing a much more granular understanding of human diversity. Regardless of whether you focus on bright- or dark-side personality characteristics, motives and values, or indeed creativity, group differences are trivial when compared with differences between individuals, even when the individuals are part of the same group.

No matter how diverse the workforce is, and regardless of what type of diversity we examine, diversity will not enhance creativity unless there is a culture of sharing knowledge. Studies mapping the social networks of organizations have found higher levels of creativity in groups that are more interconnected, particularly when creative and intrapreneurial individuals are a central node in those networks.

Unlike coaching, which tends to benefit those who need it the least (those who really need it are, alas, often uncoachable), diversity training is most effective with individuals who are skeptical of it. This is encouraging, though the challenge, of course, is to ensure that people who are cynical about diversity actually enroll in these training programs.

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Q.10 What does the author suggest about selecting employees?	
1 Employees should be selected on the basis of diversity of backgrounds.	
2 Employees should be selected on the basis of their creativity.	
3 Employees should be selected on the basis of their educational qualifications.	
4 C Employees should be selected on the basis of their cognitive ability.	
•	

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Answer key/Solution

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Q.11 The most dominant aspects of diversity are by nature:	
1 Odemographic.	
2 ○ prejudiced.	
3	
4 ○ psychological.	
×	
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	م Answer key/Solution

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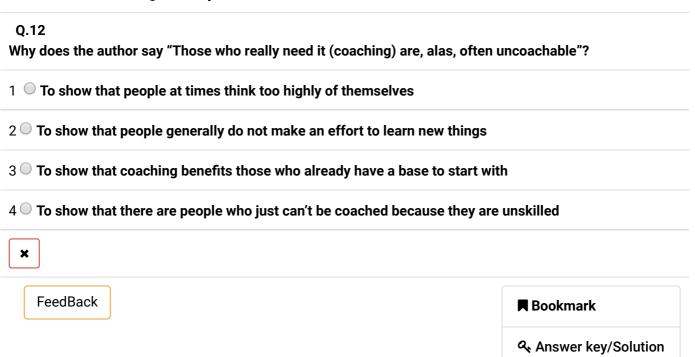
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Like Greece and China (as well as other areas throughout the rest of the world) the development of cartography was significant in Europe as well. Early medieval maps were mainly symbolic like those that came out of Greece. Beginning in the 13th century the Majorcan Cartographic School was developed and consisted of a Jewish collaboration of cartographers, cosmographers and navigators/navigational instrument makers. The Majorcan Cartographic School invented the Normal Portolan Chart – a nautical mile chart that used gridded compass lines for navigation.

Modern cartography began as various technological advancements were made. The invention of tools like the compass, telescope, sextant, quadrant and printing press all allowed for maps to be made more easily and accurately. New technologies also led to the development of different map projections that more precisely showed the world.

Q.13

The unique feature exhibited by the earliest maps was:

1 showcasing a vivid artistic description of local areas.

 the absence of topography. its ability to depict Earth symbolically. the use of complex mathematics to determine the geographical low. FeedBack 	ocations.
the use of complex mathematics to determine the geographical lo	
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Q.14

The accuracy of a map at the most basic level depends on:

1 \bigcirc the proper use of the coordinate systems.

the accuracy of the science in use. FeedBack FeedBack Rookmark Answer key/Solution	assigning a particular shape to the Earth.	
¥ FeedBack ■ Bookmark	the accuracy of the science in use.	
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Q.15

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

1 The evolution of map making is linked with human explorations.

2 China produced the oldest economic maps in the wo	rld.
3 \bigcirc In ancient times map making was considered an art	form.
4 Grecian philosophers were the first to assign a shape to Earth.	
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Q.16

Modern map making can be viewed as a symbol of:

1 substance over style.

● how modernity has made all aspects of life better.	
conquest of the past.	
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Q.17

Which of the following is a key benefit of cartography?

1 Aiding in economic growth

2 ○ Showcasing the various talents of human b	peinas	
3 Understanding and knowing the world better		
□ Helping settlers to move accurately		
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Q.18

From the passage it can be inferred that:

1 Greek philosophers changed how we looked at the world.

2 Ancient China had a proper transport system.	
3 O Ptolemy is the father of Geography.	
4 Cave walls served as papers in pre-historic times.	
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Ever wondered what the World Cup is worth? When Italian sculptor Silvio Gazzaniga designed the current trophy in 1971, it was worth US\$50,000. Now the trophy is estimated to be worth US\$10m. The World Cup is, however, worth much more than two human figures cast in 18 carat gold.

The way nations battle to put on the tournament implies there is considerable worth to a country in hosting football's biggest competition. Commonly used estimates indicated the past three World Cups would generate a positive economic impact of US\$9 billion (Japan and South Korea in 2002); US\$12 billion (Germany in 2006) and US\$5 billion (South Africa in 2010).

For this year's tournament in Brazil, various forecasters have identified the positive economic impact could range from US\$3 billion to US\$14 billion. While many will question the ethics and morality of such revenue growth, FIFA would no doubt counter by emphasising that in 2013, the organisation spent US\$183m on development projects. In the run-up to the last tournament in South Africa, Adidas sold 6m football shirts, up from 3m during Germany 2006. Similarly, Visa's 2010 World Cup YouTube channel was viewed 7.5m times, 50% more than it was expecting.

Still, there is significant evidence that could lead one to question this rosy assessment. The positive impact estimates quoted above are generally produced by governments or their hired consultants, all with a vested interest in delivering good news. After all, no politician hires economists to tell them a tournament will be a waste of money.

The estimated cost of stadiums, for instance, has tripled to \$3.68 billion. There are also indirect economic and social costs. During the Federations Cup in Brazil last summer, a World Cup warm-up tournament, there were massive and frequent protests across the country as people challenged anything from corruption to tax breaks given to FIFA to increased bus fares. Such protests add further costs to the budget; indeed, the Brazilian government is now believed to be spending around US\$855m to beef up national security.

Q.19

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

1 O Benefits from organizing a world cup should not be viewed uncritically.

2 The world cup trophy is costlier than its current evaluation. 3 Big brands play an important role in promoting football world cups.			
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Still, there is significant evidence that could lead one to question this rosy assessment. The positive impact estimates quoted above are generally produced by governments or their hired consultants, all with a vested interest in delivering good news. After all, no politician hires economists to tell them a tournament will be a waste of money.

The estimated cost of stadiums, for instance, has tripled to \$3.68 billion. There are also indirect economic and social costs. During the Federations Cup in Brazil last summer, a World Cup warm-up tournament, there were massive and frequent protests across the country as people challenged anything from corruption to tax breaks given to FIFA to increased bus fares. Such protests add further costs to the budget; indeed, the Brazilian government is now believed to be spending around US\$855m to beef up national security.

Q.20

The author mentions the issue of protests to highlight:

 $1 \bigcirc$ the way sporting events are used to cover up major issues a host nation faces.

$2 \cup$ the problems associated with estimating the cost of a mega sporting event.			
3 • the impossibility of trying to please every member of a society.			
4 the dangers associated with letting big brands meddle in national i	ssues.		
×			
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	♣ Answer key/Solution		

Ever wondered what the World Cup is worth? When Italian sculptor Silvio Gazzaniga designed the current trophy in 1971, it was worth US\$50,000. Now the trophy is estimated to be worth US\$10m. The World Cup is, however, worth much more than two human figures cast in 18 carat gold.

The way nations battle to put on the tournament implies there is considerable worth to a country in hosting football's biggest competition. Commonly used estimates indicated the past three World Cups would generate a positive economic impact of US\$9 billion (Japan and South Korea in 2002); US\$12 billion (Germany in 2006) and US\$5 billion (South Africa in 2010).

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Q.21

The central point of the first paragraph is:

 $1 \bigcirc$ to understand the fanaticism associated with football world cups.

$2 \cup{\circ}$ to understand the human factors behind organizing a world cup.		
$3 \odot$ to expose the truth behind the benefits from hosting a world cup.		
4 o to hint at the true cost of hosting a football world cup.		
•		
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	م Answer key/Solution	

In his book Food and Flavour, Henry Theophilus Finck argued that the future of the US as a vital, productive, progressive nation depended on Americans taking flavour seriously.

Finck took up the cause of deliciousness at a time when the food that people ate and where it came from were changing rapidly. Industrialisation, urbanisation and new technologies such as cold storage, canning and hydrogenation were transforming how food was produced and consumed. More Americans were eating food prepared outside the home, including processed food made in factories by giant companies such as Heinz, Campbell's, and the National Biscuit Company (Nabisco). Finck fretted that these changes made for an increasingly 'ungastronomic America'. Everywhere flavour receded before increased profits or improved efficiency. 'Time was when a crisp slice of bacon would give zest to a whole breakfast,' Finck complained, 'but the bacon served now... has no more flavour than sawdust,' as chemical preservatives replaced time-honoured methods of smoking and curing. Machine-polished rice was white and 'pretty to look at' but, 'deprived of its nutritious outer parts', it was 'as tasteless as the paste that a paper-hanger brushes on his rolls of wallpaper'. The US frozen chicken was 'foul'; its sodden canned oysters insipid; its butter bland ... 'the melancholy list of gastronomic misdeeds might be prolonged indefinitely,' he wrote. In comparison, Europe boasted crusty loaves, dazzling varieties of cured meats, savoury vegetable salads and redolent cheeses.

The problem was not that industrial modernity seemed to produce only diluted simulacra of remembered bacon, or that food technology had somehow made it impossible to find honestly smoked whitefish in New York City. The problem, Finck lamented, was that most Americans did not care. They consumed food insensibly, bolting down poorly prepared slop during rushed meals. They didn't know how to savour flavour.

Q.22

The purpose of this passage is:

- 1 to discuss the key arguments of Finck's book Food and Flavour.
- 2 to argue how new technologies were incapable of replicating the flavour of naturally-cooked food.

3 ○ to discuss Finck's argument that taking flavour seriously can contribute to a vital, productive, and progressive US.			
4 to describe Finck's view that the Americans' indifference towards flavour resulted in its taking a backseat in times of change.			
FeedBack	■ Bookmark		
	م Answer key/Solution		
Directions for questions (22 to 24): The passage below is accompanied by a set of three questions. Choose the best answer to each question. In his book Food and Flavour, Henry Theophilus Finck argued that the future of the US as a vital, productive, progressive nation depended on Americans taking flavour seriously. Finck took up the cause of deliciousness at a time when the food that people ate and where it came from were changing rapidly. Industrialisation, urbanisation and new technologies such as cold storage, canning and hydrogenation were transforming how food was produced and consumed. More Americans were eating food prepared outside the home, including processed food made in factories by giant companies such as Heinz, Campbell's, and the National Biscuit Company (Nabisco). Finck fretted that these changes made for an increasingly 'ungastronomic America'. Everywhere flavour receded before increased profits or improved efficiency. 'Time was when a crisp slice of bacon would give zest to a whole breakfast,' Finck complained, 'but the bacon served now has no more flavour than sawdust,' as chemical preservatives replaced time-honoured methods of smoking and curing. Machine-polished rice was white and 'pretty to look at' but, 'deprived of its nutritious outer parts', it was 'as tasteless as the paste that a paper-hanger brushes on his rolls of wallpaper'. The US frozen chicken was 'foul'; its sodden canned oysters insipid; its butter bland 'the melancholy list of gastronomic misdeeds might be prolonged indefinitely,' he wrote. In comparison, Europe boasted crusty loaves, dazzling varieties of cured meats, savoury vegetable salads and redolent cheeses.			
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The problem was not that industrial modernity seemed to produce only diluted simulacra of remembered bacon, or that food technology had somehow made it impossible to find honestly smoked whitefish in New York City. The problem, Finck lamented, was that most Americans did not care. They consumed food insensibly, bolting down poorly prepared slop during rushed meals. They didn't know how to savour flavour.

Q.23
As per the passage, all of the following are true EXCEPT:

1 Industrialisation, urbanisation, and new technologies were changing food production and consumption patterns.

2 Machine-polished rice, though tasty and attractive, lacked the nutrition of its outer parts.

3 Americans did not know how to savour flavour.

4 ○ Cold storage, canning and hydrogenation are some of the food technologies mentioned in the passage.

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Answer key/Solution

Directions for questions (22 to 24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

In his book Food and Flavour, Henry Theophilus Finck argued that the future of the US as a vital, productive, progressive nation depended on Americans taking flavour seriously.

Finck took up the cause of deliciousness at a time when the food that people ate and where it came from were changing rapidly. Industrialisation, urbanisation and new technologies such as cold storage, canning and hydrogenation were transforming how food was produced and consumed. More Americans were eating food prepared outside the home, including processed food made in factories by giant companies such as Heinz, Campbell's, and the National Biscuit Company (Nabisco). Finck fretted that these changes made for an increasingly 'ungastronomic America'. Everywhere flavour receded before increased profits or improved efficiency. 'Time was when a crisp slice of bacon would give zest to a whole breakfast,' Finck complained, 'but the bacon served now... has no more flavour than sawdust,' as chemical preservatives replaced time-honoured methods of smoking and curing. Machine-polished rice was white and 'pretty to look at' but, 'deprived of its nutritious outer parts', it was 'as tasteless as the paste that a paper-hanger brushes on his rolls of wallpaper'. The US frozen chicken was 'foul'; its sodden canned oysters insipid; its butter bland ... 'the melancholy list of gastronomic misdeeds might be prolonged indefinitely,' he wrote. In comparison, Europe boasted crusty loaves, dazzling varieties of cured meats, savoury vegetable salads and redolent cheeses.

The problem was not that industrial modernity seemed to produce only diluted simulacra of remembered bacon, or that food technology had somehow made it impossible to find honestly smoked whitefish in New York City. The problem, Finck lamented, was that most Americans did not care. They consumed food insensibly, bolting down poorly prepared slop during rushed meals. They didn't know how to savour flavour.

Q.24

The author has used the example of machine-polished rice to primarily argue that:

- 1 how new food technologies were depriving food of nutrition.
- 2 how the changes in food patterns gave preference to profits and efficiency over taste.
- 3 how chemical preservatives were depriving food of taste and nutrition.
- 4 how the changes in food patterns were focused on the 'look' of food to increase profits.

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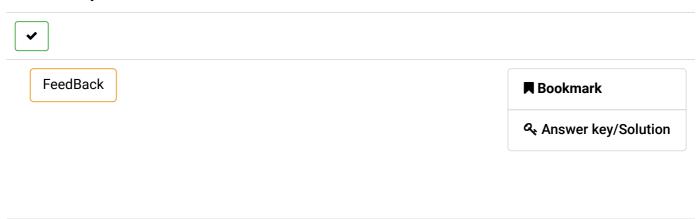
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Answer key/Solution

Q.25

Directions for question 25: The passage given below is followed by four summaries. Choose the option that best captures the author's position. When defining equality of outcome in education, "the goals should not be the liberal one of equality of access but equality of outcome for the median number of each identifiable non-educationally defined group, i.e. the average women, or proletarian or rural dweller should have the same level of educational attainment as the average male, white, suburbanite". The outcome and the benefits from equality from education from this notion of equality promotes that all should have the same outcomes and benefits regardless of race, gender, religion etc.

- 1. Some have felt that equality in education should be viewed as the removal of privilege based on identity.
- 2. Some have felt that equality in education can dislodge the hierarchical position held by Caucasian males.
- 3. Some have felt that equality in education should be confined by the access to education, irrespective of one's identity.
- 4. Some have felt that equality in education is defined by the attainment from education, irrespective of one's identity.



0.26

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

In science, good definitions are of vital importance. However, it is sometimes difficult to clearly describe the focal construct in a limited number of necessary or sufficient elements. When concepts have fuzzy boundaries, prototype analysis comes in handy. In contrast to traditional dictionary definitions that identify a set of boundary conditions for a construct, a prototype analysis does not assume that all elements that are important for a construct are present at all times. Instead, it identifies a set of features that people see as representative to that construct.

- 1. As against dictionary definitions, a prototype analysis can provide us many insights because it gives us important and crucial information about the construct under investigation.
- 2. As against dictionary definitions, a prototype analysis should be preferred, for it provides just the necessary characteristic features of the construct under investigation.
- 3. As against dictionary definitions, with prototype approach one can list those characteristics that are important to describe the construct under investigation.
- 4. As against dictionary definitions, with prototype approach one can fruitfully conceptualize many fuzzy concepts.

Q.27

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

To romance of the future may seem to be indulgence in ungoverned speculation for the sake of the marvelous. Yet controlled imagination in this sphere can be a very valuable exercise for minds bewildered about the present and its potentialities. Today we should welcome, and even study, every serious attempt to envisage the future of our race; not merely in order to grasp the very diverse and often tragic possibilities that confront us, but also that we may familiarize ourselves with the certainty that many of our most cherished ideals would seem puerile to more developed minds. To romance of the far future, then, is to attempt to see the human race in its cosmic setting, and to mould our hearts to entertain new values.

- 1. The imaginative construction of possible future events can be potent if our imagination is disciplined and if our mind accepts that our ideals may appear silly to the developed minds.
- 2. The imaginative construction of possible future events, if properly blockaded by our mind, is valuable for the present as it would help us not to go beyond the bounds of possibility.
- 3. The imaginative construction of possible future events is marvelous to those for whom prophecy is the most productive and fruitful as they know how to control the limits of their imagination.
- 4. The imaginative construction of possible future events becomes a futile practice for those who do not limit the strength of their imagination, but simply accept that their ideals are an object of mockery for the most developed minds.

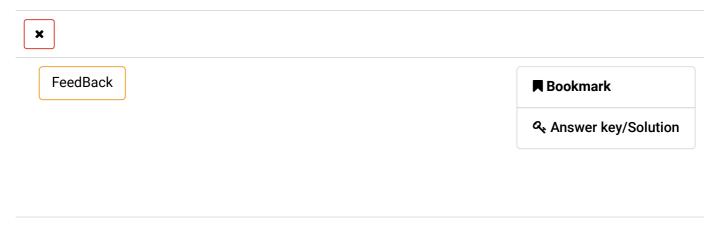
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Q Answer key/Solution

0.28

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

- 1. Mirrors and poetry, as well as myth and fairytales, refract reality in unexpected ways.
- 2. In performance, the audience hears the text, recorded in advance or recited in real time, in fragments, and sees components such as movements, props, drawings and video that may relate only indirectly to the text.
- 3. When I use a myth or a story or a literary text in my work, I often extract particular passages from a larger narrative that resonates with me.
- 4. I don't change the language, but rather I change the context, which opens up the text to different possibilities of meaning.
- 5. Mirrors can collapse or confuse the distance between performer and audience and disrupt visual frameworks.



Q.29

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

- 1. Alas, this completely misses the point.
- 2. Patrick Cosgrove argues that the answer to the Facebook data scandal is simple stop using Facebook.
- 3. A few of us have never been a member of Facebook, but they still hold data about us, gathered from our friends and family who do have Facebook accounts.
- 4. The more they know, the more they can deduce and infer and the more that information can be abused when it falls into the wrong hands.
- 5. Worse, given that Facebook also buys data about people from third-party brokers, the profile they have on us is probably far more detailed and complete than we might like to think.

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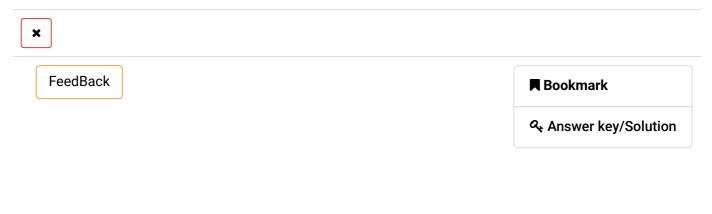
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Answer key/Solution

0.30

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

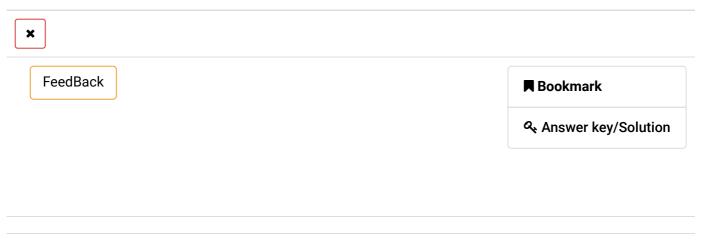
- 1. Some conscientious consumers are forsaking all plastics entirely out of health concerns.
- 2. But while it is true that exposure to certain chemicals found in some plastics has been linked to various human health problems, only a small percentage of plastics contain them.
- 3. Most Tupperware products are made of LDPE or PP, and as such are considered safe for repeated use storing food items and cycling through the dishwasher.
- 4. According to The Green Guide, a website and magazine devoted to greener living and owned by the National Geographic Society, the safest plastics for repeated use in storing food are made from high-density polyethylene, low-density polyethylene and polypropylene.
- 5. The recent hubbub over plastic containers leaching chemicals into food and drinks has cast a pall over all kinds of plastics that come into contact with what we ingest, whether deserved or not.



Q.31

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

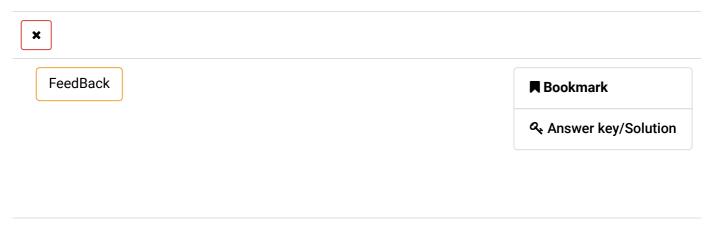
- 1. Moreover, it encouraged the humblest citizen to be proud of his partnership in the great community.
- 2. Attention which elsewhere was absorbed in the massing or display of money was in Russia largely devoted either to spontaneous instinctive enjoyments or to cultural activity.
- 3. After the Bolshevic revolution a new element appeared in Russian culture, and one which had not been known before in any modern state.
- 4. Still more important, the native Russian disposition not to take material possessions very seriously cooperated with the political revolution, and brought about such a freedom from the snobbery of wealth as was quite foreign to the West.
- 5. The old regime was displaced by a real proletarian government, which, though an oligarchy, and sometimes bloody and fanatical, abolished the old tyranny of class.



0.32

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

- 1. The community experienced drastic increase in numbers ever since it was made available to the public.
- 2. Sometimes disillusionment creeps in one small let-down at a time. 3. Hermes' blog, Naturopathic Diaries, has gained a huge following in the sceptic community.
- 4. But for Britt Marie Hermes, the transition from alternative medicine practitioner to sceptic occurred over the course of a weekend.
- 5. After an unsettling discovery at the Arizona clinic where she worked four years ago, Hermes turned her back on everything she had believed in and set out to expose what she describes as the dubious and unethical underbelly of her former profession.



0.33

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

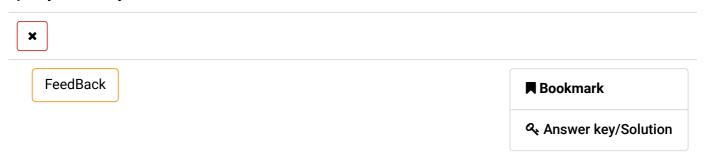
- 1. It has since emerged that he was known to French intelligence services, who were concerned he was at risk of Islamist radicalisation.
- 2. Lakdim himself was shot dead, but his motive for the attack shines a light on the continuing threat posed by another Islamist extremist, still being held behind bars.
- 3. Lakdim had demanded the release of Salah Abdeslam, the sole survivor from the group behind the 2015 Paris attacks that killed 130 people.
- 4. The 2015 Paris attack has been seen as an act which caused a major shift in global geopolitics.
- 5. Last Friday, 25-year-old Redouane Lakdim killed four people and injured 16 others after taking hostages in a supermarket in south-west France.



0.34

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

- 1. No one denies that among those who initially supported "offshore processing" were many well-intentioned people.
- 2. For over four years, in desperate conditions, they have had to endure. 3. Equally true, however, is the fact that Australia's treatment of these human beings and families has long been unwatchable.
- 4. Noble motivations might have been one reason why some, at first, turned away when confronted with a harsh and cruel reality.
- 5. Driven to desperation by the tragedy of global displacement and its consequences, most turned to this policy reluctantly.



Sec 2

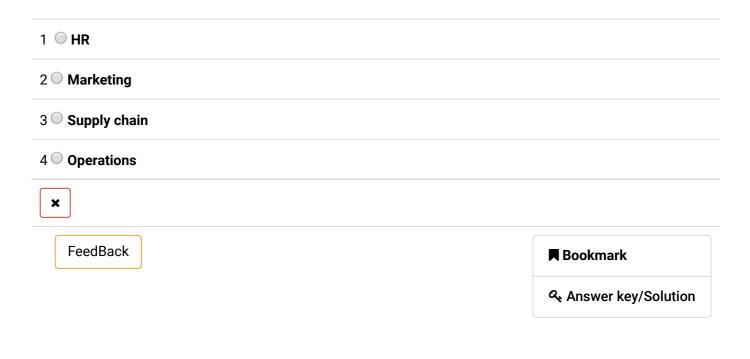
Directions for questions 35 to 38: Answer the questions on the basis of the information given below.

Monica has a habit of organizing all her documents neatly. She has made three boxes, one of each - red, green and yellow colour. In each box she has kept five different folders - Finance, HR, Marketing, Operations and Supply chain - one of each type, placed one above the another from top to bottom, in any order. Except Operations, no folder is at the same position from bottom in any two folders e.g. if finance is at the top in any folder then it cannot be at the top in any other folder. It is also known that:

- (i) In each box, there are at least two folders above the folder of Finance and there are at least two folders below the folder of HR. Operations is never at the top in any box.
- (ii) In the green box, there are exactly two folders between Operations and Finance folders and the same is true for Supply chain and HR folders.
- (iii) HR is not the 4th folder from the bottom in yellow box and Operations is just below the Marketing folder in the red box.

Q.35

Which folder is at the top in the yellow box?



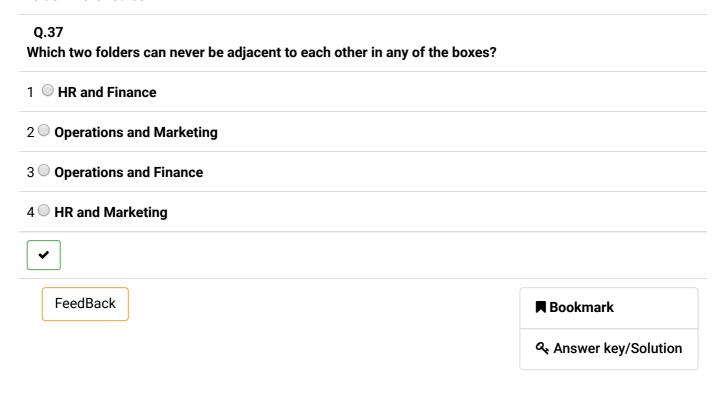
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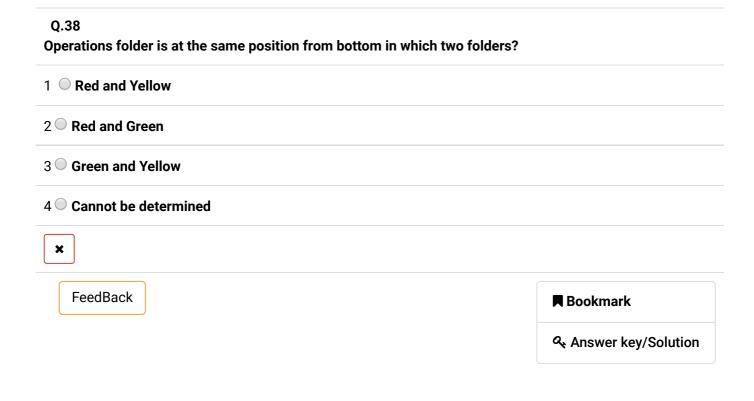
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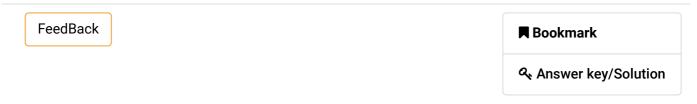
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The following table provides partial details about the number of test matches and one day internationals (ODIs), played by 4 players of the Indian Cricket team against each of the 4 nations - Pakistan, New Zealand, England and Sri Lanka. It is given that Indian team played only against these nations in the year 2017 and also they played no form of matches other than test matches and ODIs. India played 40% of its total matches against Pakistan, 30% against New Zealand, 20% against England and 10% against Sri Lanka in 2017.

Players	Pakistan		New Zealand		England		Sri Lanka	
riayeis	Tests	ODIs	Tests	ODIs	Tests	ODIs	Tests	ODIs
Virat	15			10	8	6	9	
Hardik		12		15	4	9	7	8
Rohit	16	14	10	10		12		11
Shikhar	7		15		6	14	8	10

Q.39 Find the minimum possible number of matches played by India in 2017.



The following table provides partial details about the number of test matches and one day internationals (ODIs), played by 4 players of the Indian Cricket team against each of the 4 nations - Pakistan, New Zealand, England and Sri Lanka. It is given that Indian team played only against these nations in the year 2017 and also they played no form of matches other than test matches and ODIs. India played 40% of its total matches against Pakistan, 30% against New Zealand, 20% against England and 10% against Sri Lanka in 2017.

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Flayers	Tests	ODIs	Tests	ODIs	Tests	ODIs	Tests	ODIs
Virat	15			10	8	6	9	
Hardik		12		15	4	9	7	8
Rohit	16	14	10	10		12		11
Shikhar	7		15		6	14	8	10

Q.40	
Minimum number of matches not played by Shikhar against Eng	land is
1 0 2	
2 0 10	
3 0 20	
4 🔾 15	
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	م Answer key/Solutior

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Flayers	Tests	ODIs	Tests	ODIs	Tests	ODIs	Tests	ODIs
Virat	15			10	8	6	9	
Hardik		12		15	4	9	7	8
Rohit	16	14	10	10		12		11
Shikhar	7		15		6	14	8	10

Q.41
If Rohit played in all the ODIs and tests that have been played against Sri Lanka, then the minimum number of test matches played by India against Sri Lanka is

1 07	
2 ○ 9	
3 🔾 20	
4 🔾 5	
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	ه Answer key/Solution

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Players	Pakistan		New Zealand		England		Sri Lanka	
Flayers	Tests	ODIs	Tests	ODIs	Tests	ODIs	Tests	ODIs
Virat	15			10	8	6	9	
Hardik		12		15	4	9	7	8
Rohit	16	14	10	10		12		11
Shikhar	7		15		6	14	8	10

0.42

If Rohit played in all the test matches against England and Sri Lanka, then the minimum possible number of matches played by Rohit through out the season is

1 0 87	
2 ○ 90	
3 ○ 73	
4 ○ Cannot be determined	
FeedBack	■ Bookmark

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

The following table gives the data about the percentages of vitamin B12, caffeine, sugar and taurine present in each of the four energy drinks - D1, D2, D3 and D4.

Drink	Vitamin B12	Caffeine	Sugar	Taurine
D1	25	20	30	25
D2	15	35	20	30
D3	20	20	30	30
D4	45	30	15	10

The cost (in Rs./litre) of D1, D2, D3 and D4 is 10, 25, 20 and 15 respectively. Two drinks can be mixed in any ratio to produce a drink that contains the ingredients in the required ratio.

Q.43

If a drink is to be prepared containing at least 25% of caffeine and at the minimum cost, then the ratio in which any two drinks should be mixed to get the required drink is

1 01:2	
2 0 2:3	
3 0 1:1	
4 0 1 : 4	
•	
FeedBack	■ Bookmark
	್ನ Answer key/Solution

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

The following table gives the data about the percentages of vitamin B12, caffeine, sugar and taurine present in each of the four energy drinks - D1, D2, D3 and D4.

Drink	Vitamin B12	Caffeine	Sugar	Taurine
D1	25	20	30	25
D2	15	35	20	30
D3	20	20	30	30
D4	45	30	15	10

The cost (in Rs./litre) of D1, D2, D3 and D4 is 10, 25, 20 and 15 respectively. Two drinks can be mixed in any ratio to produce a drink that contains the ingredients in the required ratio.

Q.44

Which two drinks and in what ratio, should be mixed, to get 27% concentration of taurine at the minimum

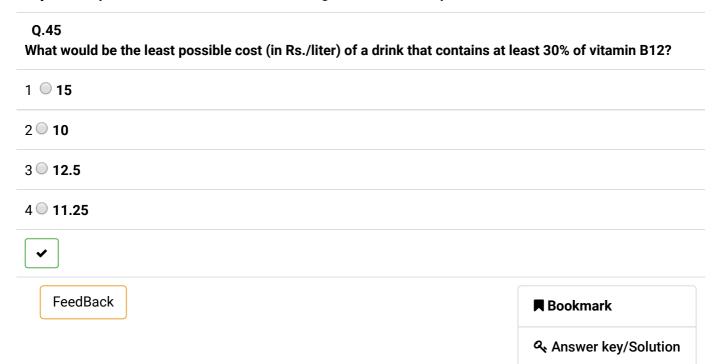
possible cost?	·	. •	
1 O D1 and D2 in 2:3			
2 O D1 and D3 in 3:2			
3 O D1 and D3 in 2:3			
4 O D2 and D3 in 1:1			
•			



The following table gives the data about the percentages of vitamin B12, caffeine, sugar and taurine present in each of the four energy drinks - D1, D2, D3 and D4.

Drink	Vitamin B12	Caffeine	Sugar	Taurine
D1	25	20	30	25
D2	15	35	20	30
D3	20	20	30	30
D4	45	30	15	10

The cost (in Rs./litre) of D1, D2, D3 and D4 is 10, 25, 20 and 15 respectively. Two drinks can be mixed in any ratio to produce a drink that contains the ingredients in the required ratio.



The following table gives the data about the percentages of vitamin B12, caffeine, sugar and taurine present in each of the four energy drinks - D1, D2, D3 and D4.

Drink	Vitamin B12	Caffeine	Sugar	Taurine
D1	25	20	30	25
D2	15	35	20	30
D3	20	20	30	30
D4	45	30	15	10

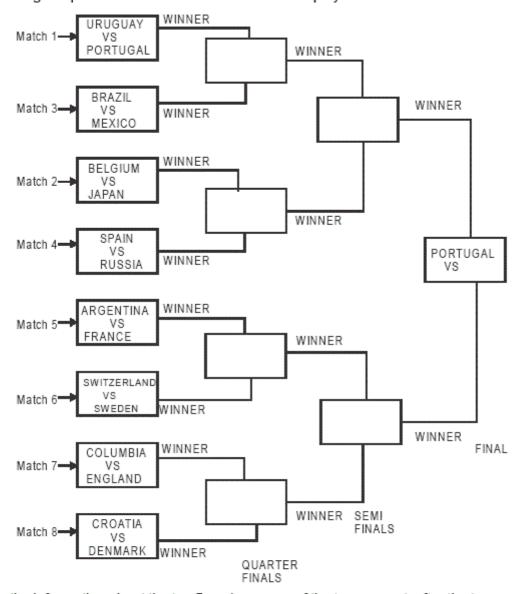
The cost (in Rs./litre) of D1, D2, D3 and D4 is 10, 25, 20 and 15 respectively. Two drinks can be mixed in any ratio to produce a drink that contains the ingredients in the required ratio.

Q.46 What is the least possible cost (in Rs. per liter) of a drink that contains at least 25% of each - vitamin B12 and caffeine? 1 ○ 11.33 2 ○ 11.66 3 ○ 17.5 4 ○ 12.5 FeedBack RedBack RedBack RedBack

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

In a football tournament, organized by Fifa, a total of 32 teams took part. After the completion of 1st round, 16 teams were eliminated and the rest 16 teams were advanced to the next round. All the subsequent rounds, except the 1st round, were of knockout format. In no match, played after the completion of the 1st round, the two teams involved have scored the same number of goals. Also, no team scored more than 2 goals after 1st round.

Following chart gives partial information about the matches played after the 1st round:



Following is the information about the top 5 goals scorers of the tournament, after the tournament is over.

Rank	Players	Country	Goals Scored
1	Messi	Argentina	7
1	Ronaldo	Portugal	7
2	Modric	Croatia	6
3	Hazard	Belgium	5
4	Neymar	Brazil	4

It is further known that:

Each of the given top 5 scorers had scored only one goal in the 1st round.

Messi did not score any goal in the semi-finals.

Pepe, a player from Portugal team, scored a goal in semi-finals.

Q.47

Which of the following teams was not in the semi-finals?

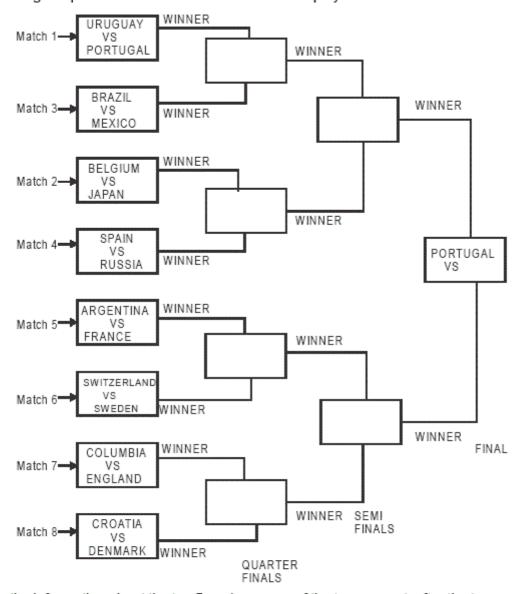
1 Argentina

2 Belgium

3 ○ Brazil	
4 Croatia	
•	
FeedBack	■ Bookmark
	م Answer key/Solution

In a football tournament, organized by Fifa, a total of 32 teams took part. After the completion of 1st round, 16 teams were eliminated and the rest 16 teams were advanced to the next round. All the subsequent rounds, except the 1st round, were of knockout format. In no match, played after the completion of the 1st round, the two teams involved have scored the same number of goals. Also, no team scored more than 2 goals after 1st round.

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4	Neymar	Brazil	4

It is further known that:

Each of the given top 5 scorers had scored only one goal in the 1st round.

Messi did not score any goal in the semi-finals.

Pepe, a player from Portugal team, scored a goal in semi-finals.

Q.48

If in a match between A and B, A beats B by 2 goals to 1, then it is represented as A(2) - B(1).

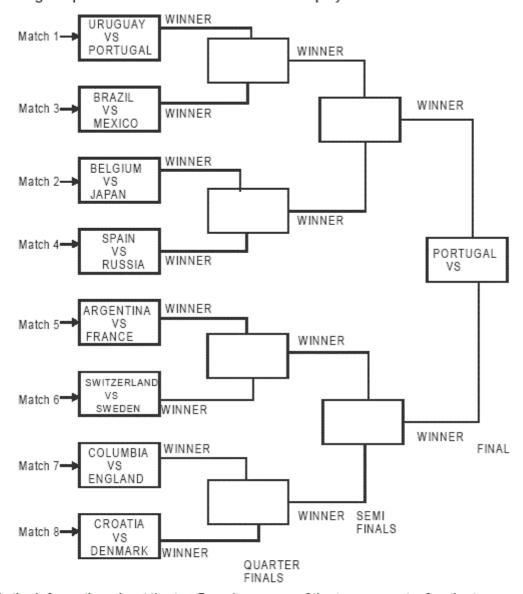
Which of the following is not a possible scoreline of a quarter-finals match?

1 O Portugal (2) - Brazil (1)

2 Argentina (2) - Sweden(0)	
3 ○ Belgium (1) - Spain(0)	
4 ○ Croatia (1) - Columbia(0)	
×	
FeedBack	■ Bookmark
	م Answer key/Solution

In a football tournament, organized by Fifa, a total of 32 teams took part. After the completion of 1st round, 16 teams were eliminated and the rest 16 teams were advanced to the next round. All the subsequent rounds, except the 1st round, were of knockout format. In no match, played after the completion of the 1st round, the two teams involved have scored the same number of goals. Also, no team scored more than 2 goals after 1st round.

Following chart gives partial information about the matches played after the 1st round:



Following is the information about the top 5 goals scorers of the tournament, after the tournament is over.

Rank	Players	Country	Goals Scored
1	Messi	Argentina	7
1	Ronaldo	Portugal	7
2	Modric	Croatia	6
3	Hazard	Belgium	5
4	Neymar	Brazil	4

It is further known that:

Each of the given top 5 scorers had scored only one goal in the 1st round.

Messi did not score any goal in the semi-finals.

Pepe, a player from Portugal team, scored a goal in semi-finals.

Q.49

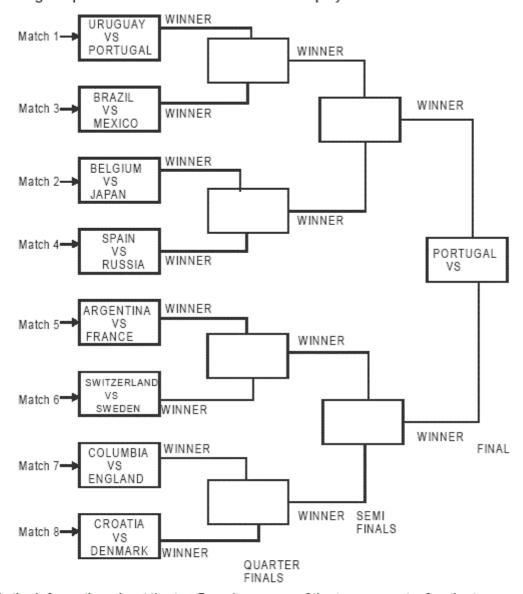
What were the results of the finale?

- 1 Portugal beats Croatia by 2 goals to1
- 2 Argentina beats Portugal by 2 goals to 1

3 O Portugal beats Argentina by 1 goal to nil				
4 ○ Croatia beats Portugal by 1 goal to nil				
×				
FeedBack	■ Bookmark			
	م Answer key/Solution			

In a football tournament, organized by Fifa, a total of 32 teams took part. After the completion of 1st round, 16 teams were eliminated and the rest 16 teams were advanced to the next round. All the subsequent rounds, except the 1st round, were of knockout format. In no match, played after the completion of the 1st round, the two teams involved have scored the same number of goals. Also, no team scored more than 2 goals after 1st round.

Following chart gives partial information about the matches played after the 1st round:



Following is the information about the top 5 goals scorers of the tournament, after the tournament is over.

Rank	Players	Country	Goals Scored
1	Messi	Argentina	7
1	Ronaldo	Portugal	7
2	Modric	Croatia	6
3	Hazard	Belgium	5
4	Neymar	Brazil	4

It is further known that:

Each of the given top 5 scorers had scored only one goal in the 1st round.

Messi did not score any goal in the semi-finals.

Pepe, a player from Portugal team, scored a goal in semi-finals.

Q.50

Which of the following is not a possible outcome of the semi-finals?

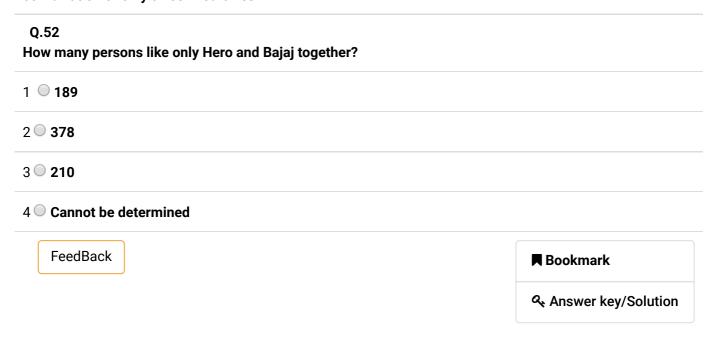
- 1 Portugal beats Belgium by 2 goals to 1
- 2 Portugal beats Belgium by 2 goals to nil.

3 Argentina beats Croatia by 2 goals to nil	
4 Argentina beats Croatia by 2 goals to 1	
FeedBack	■ Bookmark
	م Answer key/Solution

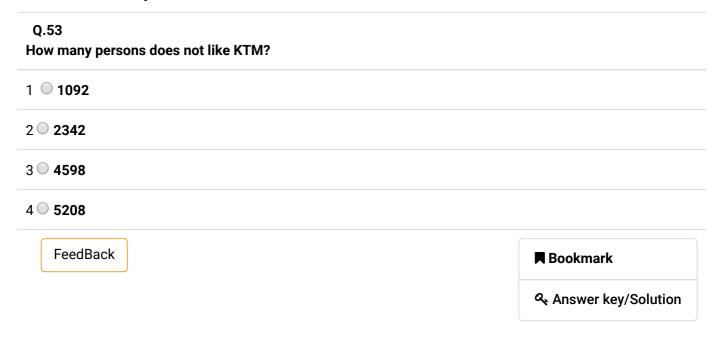
- (i) The number of persons who likes exactly one bike to the number of persons who likes exactly two bikes to the number of persons who like exactly three bikes to the number of persons who likes exactly four bikes is in ratio 4:3:2:1 respectively.
- (ii) The persons who like TVS, likes neither Hero nor Suzuki.
- (iii) The persons who likes Honda, likes neither KTM nor TVS.
- (iv) The persons who likes KTM, likes neither Hero nor TVS.
- (v) The number of persons who likes only one bike is equal for each bike.
- (vi) The number of persons who like exactly two bikes is equal for each possible combination of only two liked bikes. Similarly, the number of persons who like exactly three bikes is equal for each possible combination of only three liked bikes.



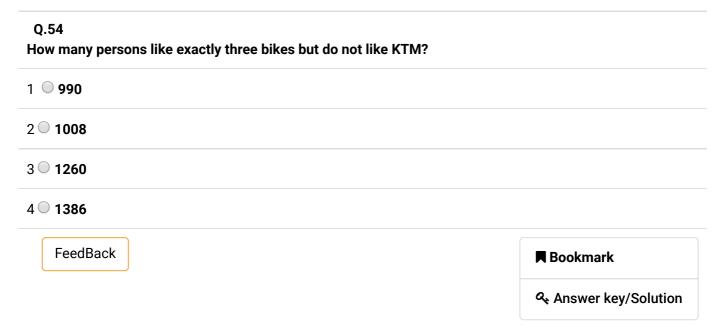
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- (vi) The number of persons who like exactly two bikes is equal for each possible combination of only two liked bikes. Similarly, the number of persons who like exactly three bikes is equal for each possible combination of only three liked bikes.



A survey was conducted to know the favourite subject of each student in a school. On 11th July 2018, when the survey was conducted for the first time, each student indicated one of the five subjects – Maths, Science, History, Hindi and English - as his/her favourite subject. When the survey was again conducted on 12th July 2018 some of the students changed their choices of favourite subject. On both the days all the students of the school participated in the survey and each student, on both days, indicated his/her favourite subject only once. The table given below shows the number of students, who changed their choice on 12th July 2018, as a percentage of total number of students who indicated that particular subject as their favourite subject on 11th July 2018.

For example, 20% of those who indicated Maths as their favourite subject on 11th July 2018 changed their choice of favourite subject to History on 12th July 2018 or 25% of those who indicated English as their favourite subject on 11th July 2018 did not change their choice of favorite subject on 12th July 2018.

On 11 th July		On 12 th July 2018				
2018	Maths	Science	History	Hindi	English	
Maths	$\frac{400}{9}\%$	9	20%	100 ₉ %	3	
Science	25%	$\frac{100}{3}$ %	200 ₉ %	$\frac{175}{18}$ %	$\frac{175}{18}\%$	
History	$\frac{65}{3}$ %	30%	$\frac{40}{3}$ %	10%	25%	
Hindi	19%	23%	15%	16%	27%	
English	$\frac{75}{7}$ %	$\frac{150}{7}$ %	$\frac{200}{21}$ %	$\frac{100}{3}$ %	25%	

Q.55
At least how many students must have participated in the survey?

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Answer key/Solution

A survey was conducted to know the favourite subject of each student in a school. On 11th July 2018, when the survey was conducted for the first time, each student indicated one of the five subjects – Maths, Science, History, Hindi and English - as his/her favourite subject. When the survey was again conducted on 12th July 2018 some of the students changed their choices of favourite subject. On both the days all the students of the school participated in the survey and each student, on both days, indicated his/her favourite subject only once. The table given below shows the number of students, who changed their choice on 12th July 2018, as a percentage of total number of students who indicated that particular subject as their favourite subject on 11th July 2018.

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On 11 th July		On 12 th July 2018			
2018	Maths	Science	History	Hindi	English
Maths	$\frac{400}{9}$ %	9	20%	100 ₉ %	3
Science	25%	$\frac{100}{3}$ %	200 ₉ %	$\frac{175}{18}$ %	$\frac{175}{18}\%$
History	$\frac{65}{3}$ %	30%	$\frac{40}{3}$ %	10%	25%
Hindi	19%	23%	15%	16%	27%
English	$\frac{75}{7}$ %	$\frac{150}{7}$ %	200 _%	$\frac{100}{3}$ %	25%

Q.56
If on 12th July 2018 a total of 56 students indicated History as their favourite subject, then how many students indicated Hindi as their favourite subject on 11th July 2018?

FeedBack

RedBack

Answer key/Solution

A survey was conducted to know the favourite subject of each student in a school. On 11th July 2018, when the survey was conducted for the first time, each student indicated one of the five subjects – Maths, Science, History, Hindi and English - as his/her favourite subject. When the survey was again conducted on 12th July 2018 some of the students changed their choices of favourite subject. On both the days all the students of the school participated in the survey and each student, on both days, indicated his/her favourite subject only once. The table given below shows the number of students, who changed their choice on 12th July 2018, as a percentage of total number of students who indicated that particular subject as their favourite subject on 11th July 2018.

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On 11 th July	On 12 th July 2018				
2018	Maths	Science	History	Hindi	English
Maths	$\frac{400}{9}$ %	9	20%	$\frac{100}{9}$ %	3
Science	25%	$\frac{100}{3}$ %	200 ₉ %	$\frac{175}{18}\%$	$\frac{175}{18}\%$
History	$\frac{65}{3}$ %	30%	$\frac{40}{3}$ %	10%	25%
Hindi	19%	23%	15%	16%	27%
English	$\frac{75}{7}$ %	$\frac{150}{7}$ %	$\frac{200}{21}$ %	$\frac{100}{3}$ %	25%

Q.57
If a total of 406 students participated in the survey, then how many students changed their choice of favourite subject during the given period?

FeedBack	■ Bookmark
	& Answer key/Solution

A survey was conducted to know the favourite subject of each student in a school. On 11th July 2018, when the survey was conducted for the first time, each student indicated one of the five subjects – Maths, Science, History, Hindi and English - as his/her favourite subject. When the survey was again conducted on 12th July 2018 some of the students changed their choices of favourite subject. On both the days all the students of the school participated in the survey and each student, on both days, indicated his/her favourite subject only once. The table given below shows the number of students, who changed their choice on 12th July 2018, as a percentage of total number of students who indicated that particular subject as their favourite subject on 11th July 2018.

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On 11 th July	On 12 th July 2018				
2018	Maths	Science	History	Hindi	English
Maths	$\frac{400}{9}$ %	9	20%	$\frac{100}{9}$ %	3
Science	25%	$\frac{100}{3}$ %	200 ₉ %	$\frac{175}{18}\%$	$\frac{175}{18}\%$
History	$\frac{65}{3}$ %	30%	$\frac{40}{3}$ %	10%	25%
Hindi	19%	23%	15%	16%	27%
English	$\frac{75}{7}$ %	$\frac{150}{7}$ %	200 _%	$\frac{100}{3}$ %	25%

Q.58

If the number of students who participated in the survey was less than 500 but was closest to 500, then which of the following subjects was chosen as their favorite subject by maximum number of students on 12th July 2018?

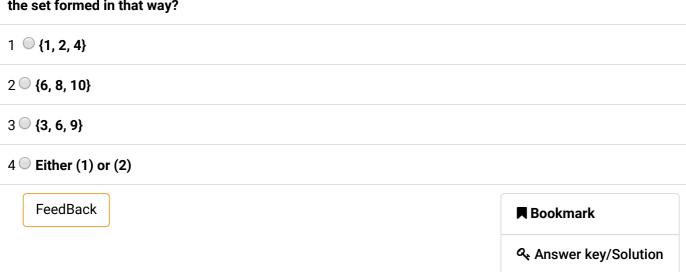
1 O Maths	
2 O Science	
3 O History	
4 C English	
FeedBack	■ Bookmark
	م Answer key/Solution

First 12 natural numbers are divided into three groups such that:

- (i) Each group contains exactly 4 numbers.
- (ii) No two numbers from any of the following sets belong to the same group {1, 2, 3}, {4, 5, 6}, {7, 8, 9}, {10, 11, 12}.
- (iii) Sum of the 4 numbers in any of the groups is same.
- (iv) If 4 numbers in one of the three groups are arranged in ascending order then the difference between any two consecutive numbers in the group will be same.

0.59

If one number is picked from each of the three groups and put in a set then which of the following can be the set formed in that way?



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

First 12 natural numbers are divided into three groups such that:

- (i) Each group contains exactly 4 numbers.
- (ii) No two numbers from any of the following sets belong to the same group {1, 2, 3}, {4, 5, 6}, {7, 8, 9}, {10, 11, 12}.
- (iii) Sum of the 4 numbers in any of the groups is same.
- (iv) If 4 numbers in one of the three groups are arranged in ascending order then the difference between any two consecutive numbers in the group will be same.

0.60

Which of the following statements is not necessarily false?

- 1 One of the groups contains 4 prime numbers.
- 2 All the multiples of three belong to the same group.
- 3 One of the groups contains 3 odd numbers.

4 All the perfect squares belong to the same group.

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Answer key/Solution

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

First 12 natural numbers are divided into three groups such that:

- (i) Each group contains exactly 4 numbers.
- (ii) No two numbers from any of the following sets belong to the same group {1, 2, 3}, {4, 5, 6}, {7, 8, 9}, {10, 11, 12}.
- (iii) Sum of the 4 numbers in any of the groups is same.
- (iv) If 4 numbers in one of the three groups are arranged in ascending order then the difference between any two consecutive numbers in the group will be same.

Q.61

If two numbers are picked from any one group then what can be the maximum value of the difference of the two numbers?

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Answer key/Solution

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

First 12 natural numbers are divided into three groups such that:

- (i) Each group contains exactly 4 numbers.
- (ii) No two numbers from any of the following sets belong to the same group {1, 2, 3}, {4, 5, 6}, {7, 8, 9}, {10, 11, 12}.
- (iii) Sum of the 4 numbers in any of the groups is same.
- (iv) If 4 numbers in one of the three groups are arranged in ascending order then the difference between any two consecutive numbers in the group will be same.

Q.62

If two numbers are picked from each of the three groups and luckily the sum of the two numbers picked from each group happens to be equal to 'n' then how many distinct values are possible for 'n'?

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Answer key/Solution

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

There are 12 friends - A, B, C, D, E, F, G, H, I, J, K and L - sitting in a grid arrangement having dimension 4 × 3 is as shown below:

	Column 1	Column 2	Column 3
Row 4	a ₄₁ F	a ₄₂	a ₄₃
Row 3	a ₃₁	a ₃₂	a ₃₃ B
Row 2	a ₂₁	a ₂₂	a ₂₃
Row 1	a ₁₁ K	a ₁₂	a ₁₃

The position of three of the friends is already given in the grid. Every cell of the grid is labeled in the form of a_{ij} , where i denotes the row number and j denotes the column number of that cell. Two friends can be said neighbour to each other if one is sitting in a cell adjacent to the other's cell vertically or horizontally but not diagonally. If A is a neighbor of B then A can be in a_{43} , a_{32} , or a_{23} only. Further, the following is also known

- (i) A and B are not neighbors to each other but C is a neighbor of B.
- (ii) L sits in a cell for which i > j.
- (iii) E and I are sitting in the same row, and A and C are sitting in the same column.
- (iv) G sits in the cell a_{ij} where i < j.
- (v) J and D sits in the cell a_{ij} and a_{ji} respectively such that i < j, and the value of i and j are same for both.
- (vi) D has more number of neighbors than E out of which 2 are common.

Q.63
How many common neighbors does H and L have?

There are 12 friends - A, B, C, D, E, F, G, H, I, J, K and L - sitting in a grid arrangement having dimension 4 × 3 is as shown below:

	Column 1	Column 2	Column 3
Row 4	a ₄₁ F	a ₄₂	a ₄₃
Row 3	a ₃₁	a ₃₂	a ₃₃ B
Row 2	a ₂₁	a ₂₂	a ₂₃
Row 1	a ₁₁ K	a ₁₂	a ₁₃

The position of three of the friends is already given in the grid. Every cell of the grid is labeled in the form of aii, where i denotes the row number and j denotes the column number of that cell. Two friends can be said neighbour to each other if one is sitting in a cell adjacent to the other's cell vertically or horizontally but not diagonally. If A is a neighbor of B then A can be in a_{43} , a_{32} , or a_{23} only. Further, the following is also known

- (i) A and B are not neighbors to each other but C is a neighbor of B.
- (ii) L sits in a cell for which i > j.
- (iii) E and I are sitting in the same row, and A and C are sitting in the same column.
- (iv) G sits in the cell a_{ii} where i < j.
- (v) J and D sits in the cell a_{ii} and a_{ii} respectively such that i < j, and the value of i and j are same for both.
- (vi) D has more number of neighbors than E out of which 2 are common.

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Which of these combinations cannot follow the same pattern as the other options does?		
1 ○ E – K –G		
2 ○ D- I – J		
3 ○ I- G –A		
4		
FeedBack	■ Bookmark	
	م Answer key/Solution	

There are 12 friends - A, B, C, D, E, F, G, H, I, J, K and L - sitting in a grid arrangement having dimension 4 × 3 is as shown below:

	Column 1	Column 2	Column 3
Row 4	a ₄₁ F	a ₄₂	a ₄₃
Row 3	a ₃₁	a ₃₂	a ₃₃ B
Row 2	a ₂₁	a ₂₂	a ₂₃
Row 1	a ₁₁ K	a ₁₂	a ₁₃

The position of three of the friends is already given in the grid. Every cell of the grid is labeled in the form of a_{ij} , where i denotes the row number and j denotes the column number of that cell. Two friends can be said neighbour to each other if one is sitting in a cell adjacent to the other's cell vertically or horizontally but not diagonally. If A is a neighbor of B then A can be in a_{43} , a_{32} , or a_{23} only. Further, the following is also known

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- (iii) E and I are sitting in the same row, and A and C are sitting in the same column.
- (iv) G sits in the cell a_{ii} where i < j.
- (v) J and D sits in the cell a_{ii} and a_{ii} respectively such that i < j, and the value of i and j are same for both.
- (vi) D has more number of neighbors than E out of which 2 are common.

Q.65

Which of these can never be true?

- 1 The cell numbers of E and C are a_{ij} and a_{pq} such that |i-j| = |p-q| = 1
- 2 H, D and B are sitting in a same row.
- 3 The cells aii of F, L, D and B are such that 'i' is greater than or equal to 'j' for all of them.
- 4 The sum of the row number and column number in which L sits is 5.

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■ Bookmark

Answer key/Solution

There are 12 friends - A, B, C, D, E, F, G, H, I, J, K and L - sitting in a grid arrangement having dimension 4 × 3 is as shown below:

	Column 1	Column 2	Column 3
Row 4	a ₄₁ F	a ₄₂	a ₄₃
Row 3	a ₃₁	a ₃₂	a ₃₃ B
Row 2	a ₂₁	a ₂₂	a ₂₃
Row 1	a ₁₁ K	a ₁₂	a ₁₃

The position of three of the friends is already given in the grid. Every cell of the grid is labeled in the form of a_{ij} , where i denotes the row number and j denotes the column number of that cell. Two friends can be said neighbour to each other if one is sitting in a cell adjacent to the other's cell vertically or horizontally but not diagonally. If A is a neighbor of B then A can be in a_{43} , a_{32} , or a_{23} only. Further, the following is also known

- (i) A and B are not neighbors to each other but C is a neighbor of B.
- (ii) L sits in a cell for which i > j.
- (iii) E and I are sitting in the same row, and A and C are sitting in the same column.
- (iv) G sits in the cell aii where i < j.
- (v) J and D sits in the cell a_{ii} and a_{ii} respectively such that i < j, and the value of i and j are same for both.
- (vi) D has more number of neighbors than E out of which 2 are common.

0.66

What is the sum of the number of neighbors that D and A have?

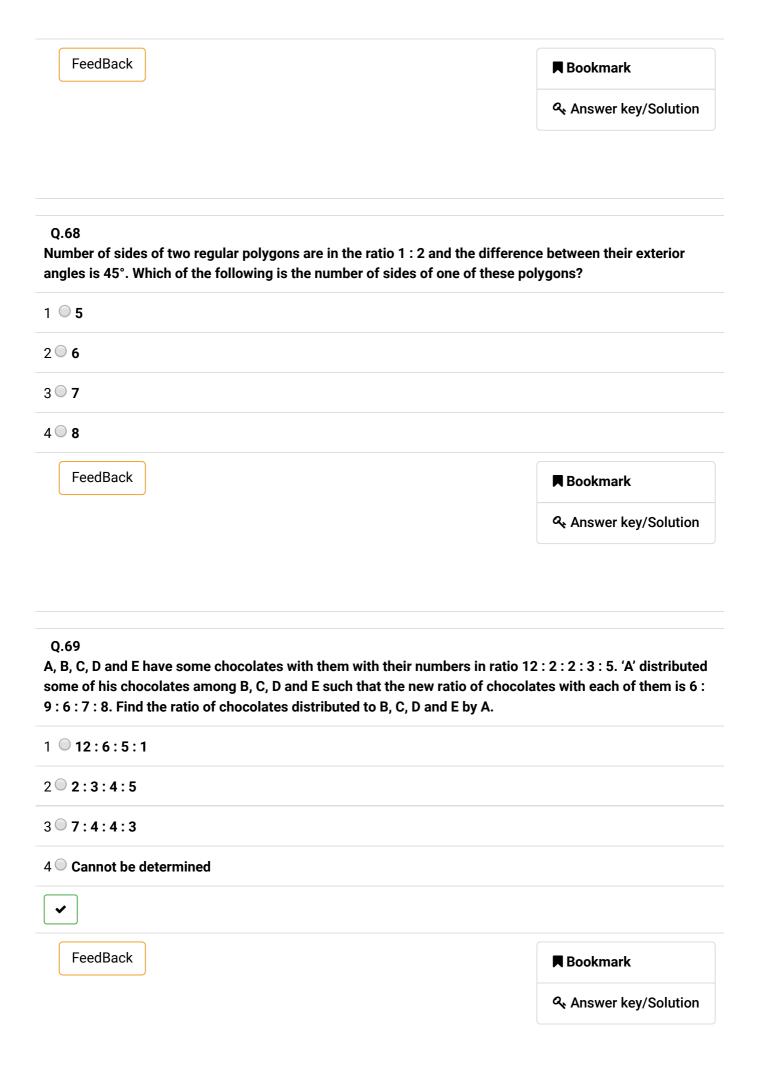
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م Answer key/Solution

Sec 3

Q.67

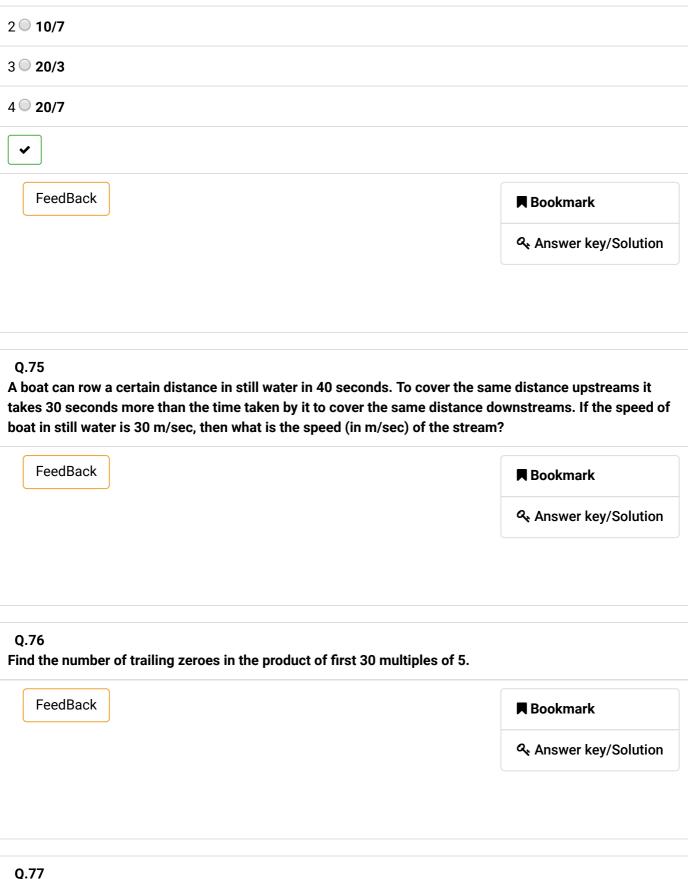
If $f(x) = (x^2 + 2x + 1)^{-y^2 + 6y + 3}$, then find the maximum value of f(-2).





0	
○ 51 kg	
○ 34 kg	
○ 68 kg	
○ 85 kg	
•	
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	م Answer key/Solutio
3.33% content of a bottle filled with Bacardi is replaced by	soda. This operation is done for 4 times. Fi
Q.71 3.33% content of a bottle filled with Bacardi is replaced by see ratio of Bacardi to soda in the final solution.	soda. This operation is done for 4 times. Fir
3.33% content of a bottle filled with Bacardi is replaced by an eratio of Bacardi to soda in the final solution.	soda. This operation is done for 4 times. Fir
3.33% content of a bottle filled with Bacardi is replaced by the ratio of Bacardi to soda in the final solution. 16:81	soda. This operation is done for 4 times. Fir
3.33% content of a bottle filled with Bacardi is replaced by the ratio of Bacardi to soda in the final solution. 16:81 65:16	soda. This operation is done for 4 times. Fir
3.33% content of a bottle filled with Bacardi is replaced by the ratio of Bacardi to soda in the final solution. 16:81 65:16 16:65	soda. This operation is done for 4 times. Fir
3.33% content of a bottle filled with Bacardi is replaced by the ratio of Bacardi to soda in the final solution. 16:81 65:16 16:65	soda. This operation is done for 4 times. Fit

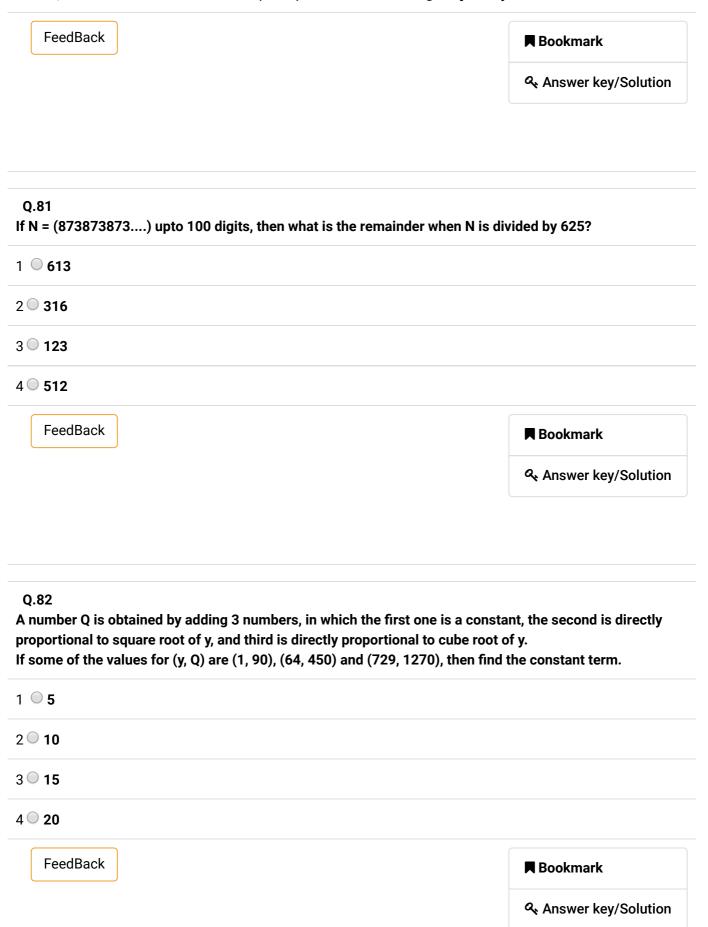
Q.72 If the roots of the equation $(x + 1)(x + 9) + 8 = 0$ are $= 0$ are	e a and b, then the roots of the equation $(x + a) (x + b) - a$
1 0 1 and 9	
2	
3 O 4 and 6	
4 ○ Cannot be determined	
•	
FeedBack	■ Bookmark
	م Answer key/Solution
sufficient amount of flowers of each type? 1 60 2 84 3 24	h type. In how many ways can he do so, if the shop has
4 0 30	
F D .	
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ьееаваск	■ Bookmark
Q.74 A, B and D can do a piece of work in 4, 10 and 12 d	



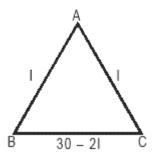
Raju can finish a job in 20 days and Monu is half as efficient as Raju. Raju worked for 'x' days alone and then left the job. After that Monu started working on it. But after y days, Raju joined him and they together took 7 more days to finish the work. For maximum how many days did Monu work alone?(x, y are natural numbers)

	■ Bookmark
	م Answer key/Solution
0.78 ow many 4-digit numbers can be formed, which are petition of digits is not allowed?	divisible by 4, using the first 8 whole numbers, if
○ 250	
○ 370	
O 120	
O None of these	
FeedBack	■ Bookmark
	م Answer key/Solution
0.79	
).
Q.79 ind the value of $(1^2 - 2^2 + 3^2 - 4^2 \dots 49^2 - 50^2)$ 1275).
ind the value of $(1^2 - 2^2 + 3^2 - 4^2 \dots 49^2 - 50^2)$	·).
ind the value of (1 ² – 2 ² + 3 ² – 4 ² 49 ² – 50 ²	·).
ind the value of (1 ² - 2 ² + 3 ² - 4 ² 49 ² - 50 ² 1275 -1275 -2125	
ind the value of (1 ² - 2 ² + 3 ² - 4 ² 49 ² - 50 ² 1275 -1275	Bookmark

It takes 5 hrs to complete a journey, if 60 km is covered by bus and the rest by train. It takes 10 minutes more, if 90 km of journey is covered by bus and the rest by train. If the ratio of speed of bus to that of train is 2:3, then what is the total distance (in km) to be covered during the journey?



An iron wire of length 30 cm is bent to form an isosceles triangle, in which the two equal sides have length 'I' cm each. Find the range of I.



- 1 0 6 < I < 20
- 2 0 8 < I < 30
- 3 0 10 < I < 15
- 4 0 7.5 < I < 15

FeedBack

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♠ Answer key/Solution

Q.84

For
$$|x| < 1$$
, $g(x) = log\left[\frac{1-x}{1+x}\right]$ and $h(x) = \frac{x^3+3x}{3x^2+1}$, then $(goh)(x)$ is

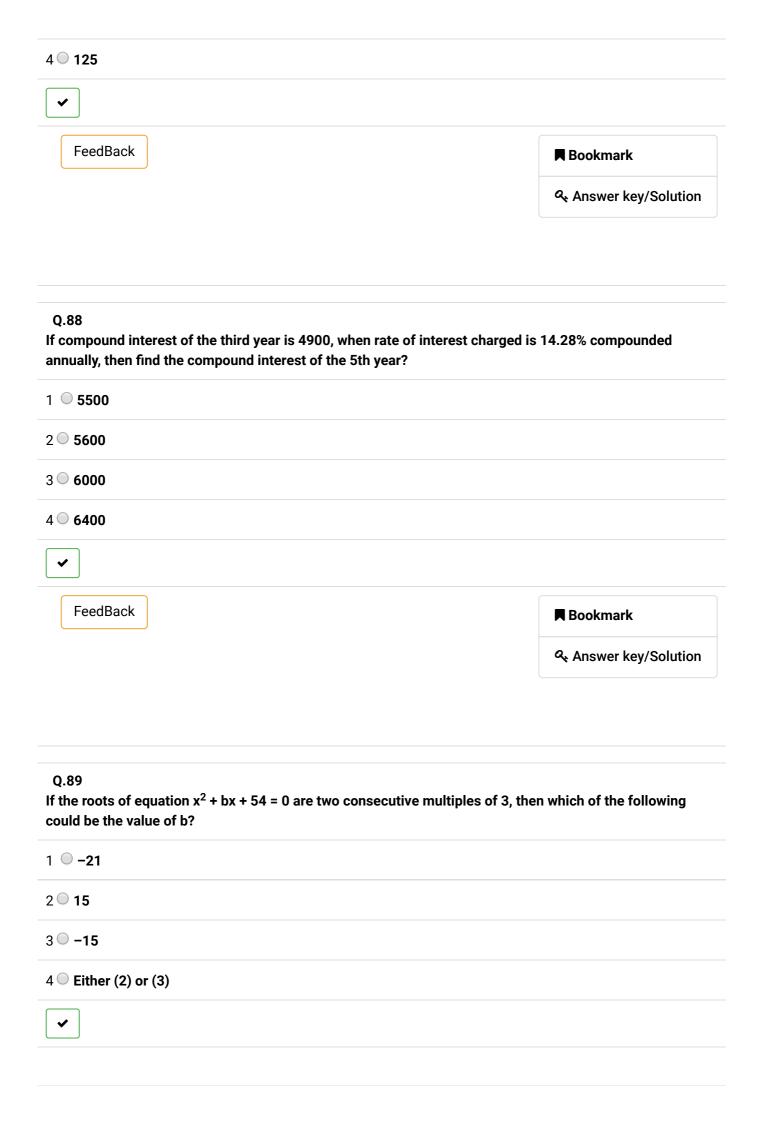
- 1 3g(x)
- 2 O 3h(x)
- $3 (g(x))^3$
- 4 (h(x))³

FeedBack

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Answer key/Solution

Q.85 Find the minimum value that should be added to the product of 171, 173, 175 a a perfect square?	and 177, so that it becomes		
1 0 1			
2 4			
3 ○ 9			
4 🔾 16			
FeedBack	■ Bookmark		
	ه Answer key/Solution		
Q.86 Ashok bought Tur Daal and marked up its price by 70%. He offered a discount of 58.88% on half of the daal, and no discount on the rest of the daal. Find his overall profit percentage.			
1 0 10%			
2 0 20%			
3 25 %			
4 🔾 16.66%			
FeedBack	■ Bookmark		
	م Answer key/Solution		
Q.87 If $xy + yz + zx = 48$, where x, y, z are three positive real numbers, then find the maximum possible value of the product (xyz).			
1 0 32			
2 0 64			
3 0 4096			



FeedBack

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Answer key/Solution

Q.90

If
$$x + \frac{1}{x} = -\sqrt{3}$$
, then the value of $(x^{42} + x^{48} + x^{54} + x^{60} + x^{66} + x^{72})$ is

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♠ Answer key/Solution

Q.91

What is the difference between the largest and the smallest possible integer satisfying the inequality

$$\left| \frac{12}{x - 15} \right| > 5 : x \neq 15$$
?

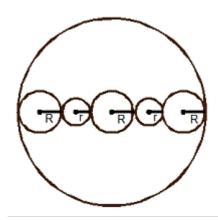


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Answer key/Solution

The area of the largest triangle that can be inscribed in the outer most circle, given in the figure below, is $4\sqrt{3}$. If the radii for the bigger and the smaller circles drawn inside the outermost circle are R and r respectively, then find the total circumference of all these 5 inner circles. (Given that the centres of all circles are collinear)



1	8π
	$\sqrt{3}$

$$2 \odot \frac{16\pi}{\sqrt{3}}$$

$$3 \bigcirc 20\sqrt{3}\pi$$

$$4 \bigcirc \frac{16}{\sqrt{3}}$$

FeedBack

■ Bookmark

Answer key/Solution

Q.93

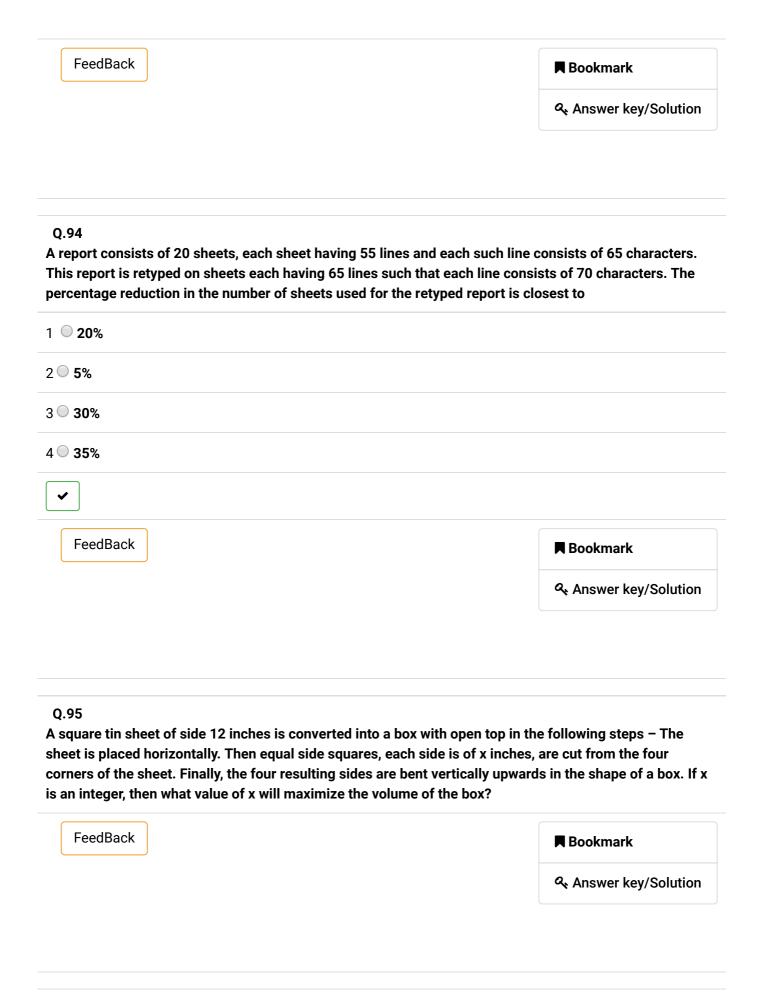
Two oranges, three bananas and four apples together cost Rs. 15, while three oranges, two bananas and one apple together cost Rs. 10. I bought 3 oranges, 3 bananas and 3 apples. How much did I pay?

1 Rs. 10

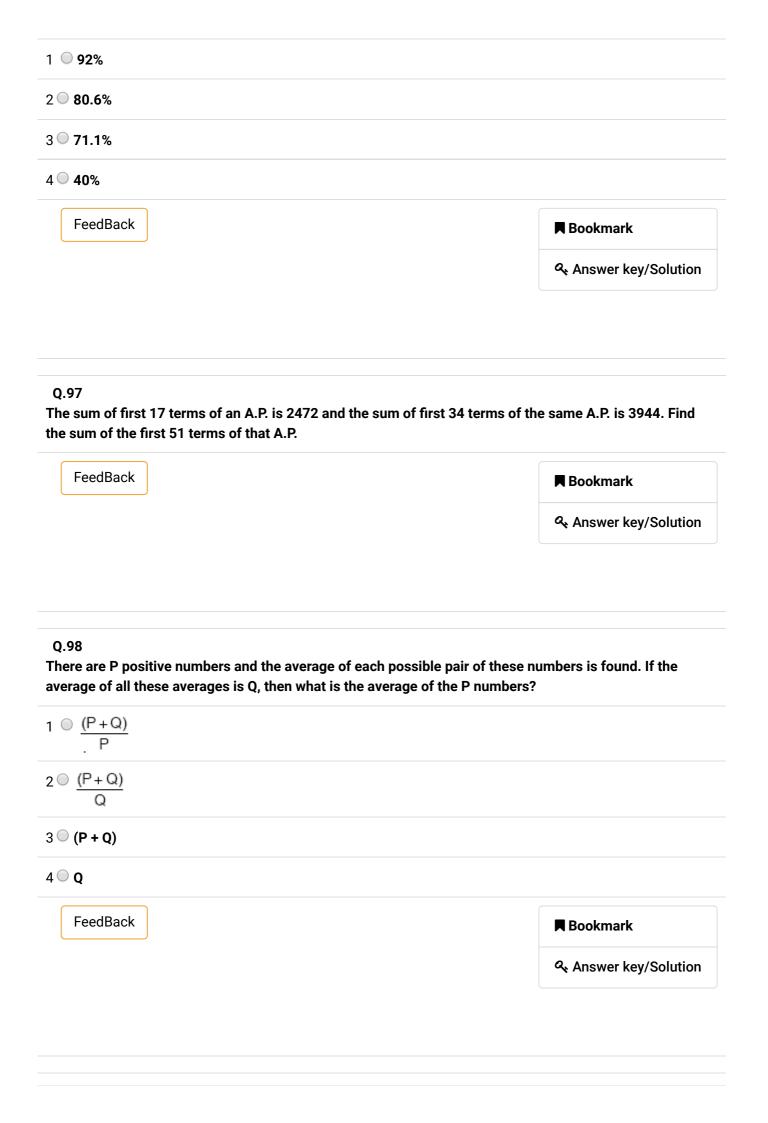
2 Rs. 8

3 **Rs. 15**

4 Cannot be determined



There is a solid cylinder of height 24 cm and radius 7 cm. A solid cone of height 24 cm and radius 7 cm is cut out from the cylinder. What is the percentage increase in the combined surface area of the cone and the remaining part of cylinder as compared to the surface area of the original cylinder?



A dice is rolled twice. The probability of getting the two numbers on the dice such that their sum is divisible by 3 is

- 1 0 1/2
- 2 0 1/9
- 3 0 1/4
- 4 0 1/3

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♠ Answer key/Solution

Q.100

What comes in the place of question mark in the given expression: $\sqrt{4\frac{2}{3}}$? $4\sqrt{\frac{2}{3}}$

Mark 1, if your answer is ">"

Mark 2, if your answer is "<"

Mark 3, if your answer is "="

Mark 4, if your answer is "Cannot be compared"



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♠ Answer key/Solution