

## Mock CAT - 03 2018

Scorecard (procreview.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 06:00:48 UTC 2019&qsetId=dFIMToUwrFw=&qsetName=Mock CAT - 03 2018)

Accuracy (AccSelectGraph.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 06:00:48 UTC 2019&qsetId=dFIMToUwrFw=&qsetName=Mock CAT - 03 2018)

Qs Analysis (QsAnalysis.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 06:00:48 UTC 2019&qsetId=dFIMToUwrFw=&qsetName=Mock CAT - 03 2018)

Video Attempt (VideoAnalysis.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 06:00:48 UTC 2019&qsetId=dFIMToUwrFw=&qsetName=Mock CAT - 03 2018)

Solutions (Solution.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 06:00:48 UTC 2019&qsetId=dFIMToUwrFw=&qsetName=Mock CAT - 03 2018)

Bookmarks (Bookmarks.jsp?sid=aaa5BycB\_LJvH-TdBuPHwSun Jan 20 06:00:48 UTC 2019&qsetId=dFIMToUwrFw=&qsetName=Mock CAT - 03 2018)

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**Q.1** 

What is the main point of the author in the passage?

- 1 To highlight the importance of past memories in creating a work of import
- $2\, {\color{red} igcup}$  To elaborate the process behind the creation of a certain work of fiction

| To lament the lack of unity in the novel which ultimately led to its disastrous reception by critics |                      |
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**Q.2** 

Which of the following can be inferred from the passage?

- 1 Imagination is the key behind a successful novel.
- 2 Pastoral writing is looked down upon by people.

| 3 The author had been cautious about his use of language.          |                       |  |
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| $4$ $\bigcirc$ Unity in the plot is essential to writing a success | ful novel.            |  |
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The author cites Richard Hughes in the passage in order to:

- 1 show how the novel had divided opinions.
- 2 mention the reception that the novel had received.

| show how people misread literary works.      specify the factors that shaped the novel. |  |                    |
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**Q.4** 

With which of the following would the author of the passage not agree?

- 1 The author had expected to spontaneously start writing at some point.
- $2\, \ensuremath{\,^\frown}$  The novel has elements of rusticity in it.

| The novel is a product of imaginary conceptions. |    |                     |
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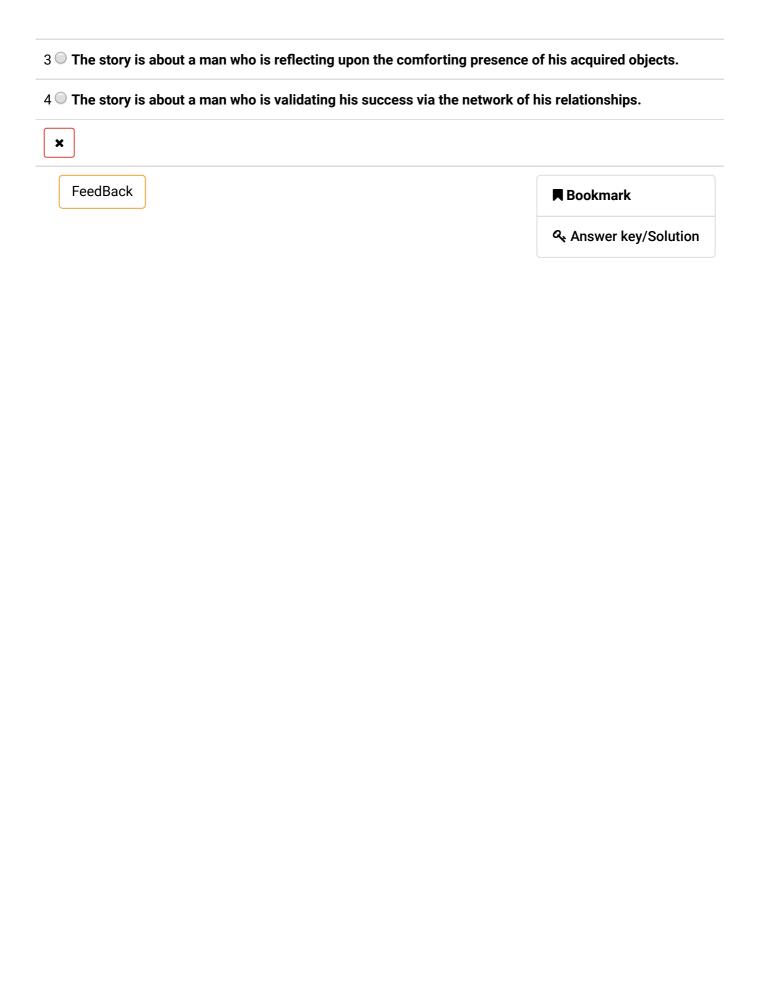
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**Q.5** 

Which of the following is true with respect to the story of the novel the author discusses in the passage?

- $1\,\,{}^\frown$  The story is about a man who is reflecting upon his past.
- $2\, {\color{orange} \bigcirc}\,$  The story is about a man who is reflecting upon the significance of relationships.



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**Q.6** 

Which of the following would best be in line with the author's belief in magic?

- 1 The way an atheist views his/her faith in times of trouble
- 2 The way a pragmatist views his winning of a lottery

| The way a mother prays for the recovery of her sick child |                       |
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At first glance, the Cornish mallow (Lavatera cretica) is little more than an unprepossessing weed. It has pinkish flowers and broad, flat leaves that track sunlight throughout the day. However, it's what the mallow does at night that has propelled this humble plant into the scientific spotlight. Hours before the dawn, it springs into action, turning its leaves to face the anticipated direction of the sunrise. The mallow seems to remember where and when the Sun has come up on previous days, and acts to make sure it can gather as much light energy as possible each morning. When scientists try to confuse mallows in their laboratories by swapping the location of the light source, the plants simply learn the new orientation.

What does it even mean to say that a mallow can learn and remember the location of the sunrise? The idea that plants can behave intelligently, let alone learn or form memories, was a fringe notion until quite recently. Memories are thought to be so fundamentally cognitive that some theorists argue that they're a necessary and sufficient marker of whether an organism can do the most basic kinds of thinking. Surely memory requires a brain, and plants lack even the rudimentary nervous systems of bugs and worms.

However, over the past decade or so this view has been forcefully challenged. The mallow isn't an anomaly. Plants are not simply organic, passive automata. We now know that they can sense and integrate information about dozens of different environmental variables, and that they use this knowledge to guide flexible, adaptive behaviour.

For example, plants can recognise whether nearby plants are kin or unrelated, and adjust their foraging strategies accordingly. The flower *Impatiens pallida*, also known as pale jewelweed, is one of several species that tends to devote a greater share of resources to growing leaves rather than roots when put with strangers – a tactic apparently geared towards competing for sunlight, an imperative that is diminished when you are growing next to your siblings. Plants also mount complex, targeted defences in response to recognising specific predators. The small, flowering *Arabidopsis thaliana*, also known as thale or mouse-ear cress, can detect the vibrations caused by caterpillars munching on it and so release oils and chemicals to repel the insects. Perhaps it's not really so surprising, then, that plants learn and use memories for prediction and decision-making.

'The plants remember,' said the behavioural ecologist Monica Gagliano, 'they know exactly what's going on.'. She reasons that if plants can produce the results that lead us to believe *other* organisms can learn and remember, we should similarly conclude that plants share these cognitive capacities. One form of learning that's been studied extensively is *habituation*, in which creatures exposed to an unexpected but harmless stimulus (a noise, a flash of light) will have a cautionary response that slowly diminishes over time. Think of entering a room with a humming refrigerator: it's initially annoying, but usually you'll get used to it and perhaps not even notice after a while. True habituation is stimulus-specific, so with the introduction of a different and potentially dangerous stimulus, the animal will be re-triggered. Even in a humming room, you will probably startle at the sound of a loud bang. This is called *dishabituation*, and distinguishes genuine learning from other kinds of change, such as fatigue.

| hy does the author give the example of the Cornish mallow in the formal to show that plants can learn new orientations easily  To show that mallows have good memory  To show that mallows can remember or predict the location of s |                       |
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| of the following help to prove that plants exhibit a flexible and adap  The mouse-ear cress launches a targeted response when it recog  Leaves of the touch- me- not plant curl up in response to human to  Hibiscus plant flowers in spring.  The Pale jewel weed plant diverts greater resources to growing leauations. | nises a specific predator.   |
|---|------------------------------|
| Leaves of the touch- me- not plant curl up in response to human to Hibiscus plant flowers in spring.  The Pale jewel weed plant diverts greater resources to growing lea  | ouch.                        |
| Hibiscus plant flowers in spring.  The Pale jewel weed plant diverts greater resources to growing lea   |                              |
| The Pale jewel weed plant diverts greater resources to growing lea  | aves of the plant in certain |
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| Q.9 According to the passage, all of the following may lead to habitus | ation except:       |
|--|---------------------|
| 1 a smelly room.   |                     |
| 2 ostreet dogs barking in the night.                                   |                     |
| 3 ○ a creaking fan.  |                     |
| 4 utensils suddenly dropped in the kitchen.                            |                     |
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| Q.10 The author intends to prove all of the following in the passage exce   | pt:                   |  |  |  |
|---|-----------------------|--|--|--|
| <ul> <li>1 that plants can learn and store memory as other animals do.</li> <li>2 that Plants do not have a division of body and mind.</li> <li>3 that Plants have cognitive capacities.</li> </ul> |                       |  |  |  |
|   |                       |  | 4 ○ that plants have a flexible and adaptive approach. |  |
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| Q.11<br>Vhich of the following can't be inferred from the a | above passage?                       |
|---|--------------------------------------|
| O Plants have well-developed defence mechan                 | nism to ward off specific predators. |
| Plants can divert their resources when put up               | with strangers.                      |
| O Plants have cognitive skills.                             |                                      |
| Plants can assimilate and integrate informati               | on.                                  |
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| Q.12 Which of the following is the essence of the last paragraph of the passage? |                                      |  |
|--|--------------------------------------|--|
| The notion that plants have thinking capacities was                              | unimaginable a few years ago.        |  |
| 2 ○ We need to redefine memory and learning to fully un                          | derstand the intelligence of plants. |  |
| Plants do not fit our set notions of memory and learn                            | ning.                                |  |
| ○ Plant memory and learning is a fact and not a mere r                           | netaphor.                            |  |
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The major concern is that this plan will shift rather than reduce medical costs, which creates winners and losers. Among the winners will be, predictably, the state itself, which will reduce the amount it pays for hospital's training subsidies through Medicaid (the nationwide program which subsidizes medical care for low-income residents, particularly through emergency hospital care). Insurance carriers are also expected to benefit; by exploiting the state's high concentration of hospitals, insurers will probably be able to negotiate discounts for the insureds' hospital care, thus cutting costs and increasing their profit margins. Those who have insured themselves may also share in the savings, depending on what percentage of the discounts will be passed along to consumers. On net, it is anticipated that most will probably enjoy somewhat lower premiums.

Much of the "savings" will fall on the shoulders of New York City, which will have to scramble to subsidize costs for the poor and uninsured, who will be turned away from hospitals. Hospitals may opt not to turn away any and, in fact, will be prohibited from turning away certain extremely low income patients, whose right to certain emergency care is protected by the state's Hill-Burton law. Of course, should hospitals continue to offer access to the uninsured, they will effectively be subsidizing the poor, and will be rewarded with lower profit margins. Some may be forced to close.

Undoubtedly, the greatest impact will be felt by the uninsured - often the poor and elderly. Since they do not enjoy the negotiated rates set by insurance companies, costs to the uninsured may rise to cover hospitals' reduced profits on insured patients. Simple economics dictates that uncompensated care will be reduced as a result of lower profit margins.

However, the plan does not take into account the historical fact that, of the increase in the cost of medical care over the past 17 years, the portion attributable to rising salaries among doctors and other hospital staff amounts to only 18.5% and that attributable to insurance costs and insurance abuse only 12.2%. Over 55% of the increase is directly related to the staggering cost of new medical technologies. The unavoidable fact remains that, if Americans insist on receiving state-of-the-art treatments, the money will have to come from somewhere.

Q.13

Which one of the following best describes the main idea of the passage?

1 O Deregulating hospital's rates and reducing subsidies for hospitals' medical training will reduce the healthcare cost for most parties involved.

| $2 \bigcirc$ The plan to reduce the cost of care in the state's hospitals is fine but there has been increase in healthcare cost and that additional money has to be paid by someone. |                     |  |
|---|---------------------|--|
| 3 Deregulating hospital's rates and reducing subsidies for hospitals' medical training are making healthcare expensive for the uninsured.   |                     |  |
| $4 \bigcirc$ The recent plan to reduce the cost of care in the New York's hospitals will provide much improved and significantly cheaper healthcare to its citizens.                  |                     |  |
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## 0.14

All of the following have led to an increase in the cost of healthcare EXCEPT:

- 1 Rising salaries of the healthcare professionals.
- 2 Increase in the insurance premium where false insurance claims are also a factor.

| Money spent on bringing in new medical tecl | hnologies.           |
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## 0.15

According to the passage, the greatest adverse effect of the plan to reduce healthcare costs will fall upon the uninsured because:

| 1 |  | they | will | be | forced | to | buy | insurance. |
|---|--|------|------|----|--------|----|-----|------------|
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| they are the only category from whom a higher charge can be levied.                                 |                       |  |
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| they may have to go without treatment leading to their missing out on work and corresponding acome. |                       |  |
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The major concern is that this plan will shift rather than reduce medical costs, which creates winners and losers. Among the winners will be, predictably, the state itself, which will reduce the amount it pays for hospital's training subsidies through Medicaid (the nationwide program which subsidizes medical care for low-income residents, particularly through emergency hospital care). Insurance carriers are also expected to benefit; by exploiting the state's high concentration of hospitals, insurers will probably be able to negotiate discounts for the insureds' hospital care, thus cutting costs and increasing their profit margins. Those who have insured themselves may also share in the savings, depending on what percentage of the discounts will be passed along to consumers. On net, it is anticipated that most will probably enjoy somewhat lower premiums.

Much of the "savings" will fall on the shoulders of New York City, which will have to scramble to subsidize costs for the poor and uninsured, who will be turned away from hospitals. Hospitals may opt not to turn away any and, in fact, will be prohibited from turning away certain extremely low income patients, whose right to certain emergency care is protected by the state's Hill-Burton law. Of course, should hospitals continue to offer access to the uninsured, they will effectively be subsidizing the poor, and will be rewarded with lower profit margins. Some may be forced to close.

Undoubtedly, the greatest impact will be felt by the uninsured - often the poor and elderly. Since they do not enjoy the negotiated rates set by insurance companies, costs to the uninsured may rise to cover hospitals' reduced profits on insured patients. Simple economics dictates that uncompensated care will be reduced as a result of lower profit margins.

However, the plan does not take into account the historical fact that, of the increase in the cost of medical care over the past 17 years, the portion attributable to rising salaries among doctors and other hospital staff amounts to only 18.5% and that attributable to insurance costs and insurance abuse only 12.2%. Over 55% of the increase is directly related to the staggering cost of new medical technologies. The unavoidable fact remains that, if Americans insist on receiving state-of-the-art treatments, the money will have to come from somewhere.

Q.16
Which of the following can be inferred from the passage?

1 The new plan will reduce Medicaid subsidies significantly and benefit the New York City.

| 2 The research involved in the development of new medical technologies is the major reason behind a increase in the cost of healthcare. |                       |  |  |  |
|---|-----------------------|--|--|--|
| 3 ○ The new plan is likely to increase the profit margins of the insurance service providers.   |                       |  |  |  |
| 4 The new plan will benefit the poor and the elderly by reducing the healthcare costs for these vulnerable sections.                    |                       |  |  |  |
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0.17

Which of the following has been assumed by the proponents of the new plan in New York?

- 1 Competitive bidding leads to lower insurance premium.
- 2 Reducing the cost of healthcare is imperative for the state.

| The benefit of the reduced cost will not be transfer        |                       |  |
|---|-----------------------|--|
| 4 ○ The uninsured may be denied treatment by the hospitals. |                       |  |
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Q.18

What does the last paragraph of the passage do in the context of the passage?

1 It disproves the effectiveness of the plan proposed by Pataki.

| It provides additional data to | support the plar  | proposed by Pataki     | •                 |                  |
|--------------------------------|-------------------|------------------------|-------------------|------------------|
| It mentions various factors t  | hat have contribu | uted to an increase in | the cost involved | with healthcare  |
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Directions for questions (19 to 21): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

Despite a mostly solid run of job growth, 2017 ends pretty much where it began — with a two-speed economy where wage growth is funneling to one end while the other lags behind. Friday's nonfarm payrolls report brought with it news all too familiar to the post-crisis economy. The 228,000 jobs created formed a solid foundation, but the pedestrian 2.5 percent average hourly earnings growth left many scratching their heads wondering how a 4.1 percent unemployment rate, the lowest in 17 years, still wasn't producing fatter paychecks.

"The lack of wage growth at the aggregate level despite the declines in the unemployment rate and strong job gains remains a mystery," Joseph Song, U.S. economist at Bank of America Merrill Lynch, said in a note to clients." One possible explanation is that structural factors such as unfavorable demographics and industry-specific dynamics are playing a bigger role than the cyclical factors," he added. "However, we continue to believe that a falling unemployment rate will ultimately underpin wages."

The latter part of that statement represents the hopes and frustrations of economists everywhere from academia to Wall Street to the halls of the Federal Reserve in Washington, D.C. With another month of strong job gains and ho-hum wage growth under its belt, 2017 is now yielding toward predictions — again — that the year ahead will finally be the one where income catches up.

"Due to a lack of available workers and sustained improvement in aggregate demand we expect wage pressures to be the primary economic narrative during the year," said Joe Brusuelas, chief economist at RSM. "Our forecast implies that wage growth during final three months of next year should be at or near 4 percent." No less than Gary Cohn, director of the White House's National Economic Council, was banging the same drum Friday morning after the jobs report hit. "As the economy continues to grow and we bring more businesses back to America, we'll create more competition for labor so we'll continue to see more wage growth over the next cycle," Cohn said on CNBC's "Squawk on the Street."

It might not be that simple.

The Trump administration sees one of the answers to the wage puzzle as simply providing more supply of business demand against a shrinking pool of workers. But American business is faced with a unique challenge in that employers are having a hard time finding the right workers for the positions they have open. That issue has been reflected in the periodic summaries the Fed releases of economic conditions across its districts, and is on the minds of those on the front lines trying to match skilled workers with open jobs.

"From a wage standpoint, skills are the new currency," said Chris Layden, vice president of Manpower North America, a workforce solution business that helps companies find suitable workers. "We're seeing the emergence of a skills revolution. Technology is transforming how work is getting done. "Those skills are seeing rising pay. Those that [don't have skills] are getting left behind." Training and internships have been stressed in recent years as a way to bridge the gap. But even those kinds of programs are falling short.

Layden said that until all sides synchronize in the fight against wage stagnation, the picture of the last several years likely will remain unchanged. "Where we see programs most effective are really where they are bringing all stakeholders to the table," he said. "Employers are leading this and are being very clear on the jobs they need. Training for training's sake doesn't work. We need training for a job."

Q.19

What is the main idea of the passage?

| 1 ○ To comment on the fact that Trump administration has been unable track despite a strong growth in jobs                      | e to put wage growth rate back on |
|---|-----------------------------------|
| 2 To understand the mystery behind the slow growth of wages   |                                   |
| 3 To discuss solutions which can be used to tackle the problem of lag coming year   | ging wage growth rate in the      |
| $4 {}^{\bigcirc}$ To analyze the views of various experts regarding the reasons behind this situation can be improved in future | nd stagnated wage growth and how  |
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Q.20

According to the passage, which of the following are the possible reasons behind the slow wage growth rate in the US?

- A. More supply of business demand against a shrinking pool of workers
- B. Unfavourable demographics and industry-specific dynamics
- C. Falling unemployment rate which translates into more supply of workers is one of the reason due to which wage growth rate is slow.

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|------------|-----------------------|
| 2 O A & C  |                       |
| 3 ○ Only B |                       |
| 4 ○ B & C  |                       |
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Q.21

Which of the following is a key assumption made by the author?

| 1 Strong job gains will always be accompanied with sharp wage g  | rowth.                                 |
|--|--|
| $2 \bigcirc$ Wage growth stagnation can end only if employees are trained arijobs.                               | nd skilled to match the requirement of |
| 3 Simply bringing more businesses to America and creating more labour will not help to increase the wage growth. | competition among businesses for       |
| 4 O Usually, there is a strong negative correlation between unemploy   | ment rate and wage growth rate.        |
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Directions for questions (22 to 24): The passage below is accompanied by a set of three questions. Choose the best answer to each question.

Humour is the tendency to look at things from the mirthful or incongruous side. It is the quality that makes something laughable or amusing. Humour is the ability to perceive, enjoy, or express what is amusing or comical. It is the source of laughter and the catalyst of smiles. Humour is the spark that lights our eyes as well as the cause of tears that never grows old. Humour is a state of mind.

Most of us have a tendency to regard a clever sense of humour as the distinction of a person who is good hearted and friendly, someone people feel at ease with. They are "life of the party" we always invite and the co-worker who always has a joke. Everyone has the jocular family member that they always look forward to seeing. We remember the kid in school that always made the class break into laughter. Humour is never forgotten when we reminisce and it is just as amusing as it was the first time.

Humour can be used like a sniper's gun, picking people off when they least expect it. When we use humour to hurt, we abuse the fundamental essence of this wonderful gift. We must teach our children the difference between what is funny and what is cruel. A joke is never humorous if it is at the expense of another.

Some people use humour to hide from their real emotions. Using humour to help get through the difficult times is a lot different than using humour to hide from them.

Hiding behind humour can be a serious problem; it cannot be the only way of expressing our emotions. Some of the greatest comedians have been secretly depressed. Using humour as a defence mechanism can be a serious mental health issue.

Those who use humour to its best advantage teach others by example. Instead of getting angry when something goes wrong, we should try to look for the humour in the situation. It eases tensions and keeps things in perspective. Humour can energize us when a task has become tedious. Humour can make even the worst of situations tolerable.

0.22

Which of the following defines humour appropriately?

| $1 \bigcirc$ It is a quality by which we can entertain others but often fail to jovial one.                  | change a grievous atmosphere into a |
|--|-------------------------------------|
| 2  Humour is that state of mind that can only be used to perceive  | and spread happiness and laughter.  |
| 3 O Humour being a state of mind helps us to perceive situations w   | vith incongruousness and joviality. |
| $4 \bigcirc$ Humour helps us to hide our real emotions; hence it acts as a sinsensitive to grave situations. | shield against people who are       |
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| Q.23<br>Il of the statements given belo  | w are false, except:       |  |
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| O Many often fail to inspire p tuations. | eople to see things in a h | umorous way which might lighten grievous     |
| Difficult work load at work p            | places can be dealt with e | ease with proper use of humour.              |
| Situations may lose their se             | eriousness because of app  | plied humour in grave situations.            |
| Humour can be used as an                 | escape device by which o   | one can transcend reality and become nonchal |
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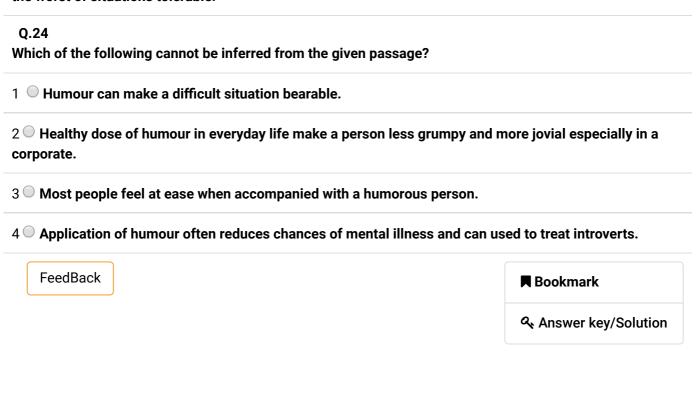
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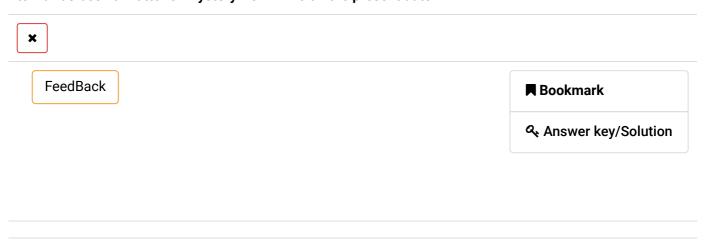


# Q.25

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

In 1915, a team of American archaeologists excavating the ancient Egyptian necropolis of Deir el-Bersha blasted into a hidden tomb. Inside the cramped limestone chamber, they were greeted by a gruesome sight: a mummy's severed head perched on a cedar coffin. The archaeologists went on to recover painted coffins and wooden figurines that survived the raid and sent them to the Museum of Fine Arts, Boston in 1921. Most of the collection stayed in storage until 2009 when the museum exhibited them. Though the torso remained in Egypt, the decapitated head became the star of the showcase. With its painted-on eyebrows, somber expression and wavy brown hair peeking through its tattered bandages, the mummy's noggin brought viewers face-to-face with a mystery.

- 1. In an Egyptian tomb, a mummy's head, along with some coffins and wooden articles were discovered in 1915 by a team of archaeologists, which are now present at the Museum of Fine Arts in Boston.
- 2. A mummy's severed head, along with coffins and wooden figurines were found in 1915 by a team of American archaeologists from an Egyptian tomb, that were sent to Boston's Fine Arts Museum a few years later, and the mystery began.
- 3. In a tomb of an Egyptian necropolis Deir el-Bersha, a mummy's severed head along with coffins and wooden figurines were found in 1915, and till date there is a mystery that surrounds them which even the Museum of Fine Arts in Boston could not resolve.
- 4. The discovery of a mummy's severed head along with coffins and wooden figurines from the Egyptian tomb has been a matter of mystery from 1915 till the present date.

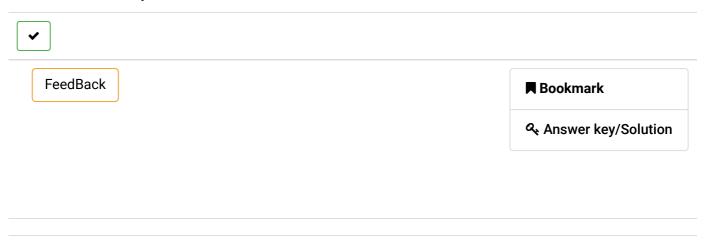


## 0.26

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

The cost of a coronary calcium scan (CCS), though still not covered by insurance, has come down significantly — to about \$100, in some cases — and could be of great value for millions of aging Americans at risk of life-threatening heart disease. It is one of the two currently popular noninvasive X-ray techniques to assess cardiac risk and help determine who could benefit from treatments to ward off a crippling or fatal heart attack.

- 1. Now available at a lesser price, a CCS is widely used to assess American patients considered to be at risk of heart disease. 2. Now available at a lesser price, a CCS is widely used as the information obtained can help evaluate whether aging Americans are at a risk for heart attack.
- 3. Now available at a lesser price, a CCSis useful in imaging modality for cardiovascular risk assessment in moderate risk aging American patients.
- 4. Now available at a lesser price, aCCS is believed to have a superior role in predicting future cardiac events in American patients.

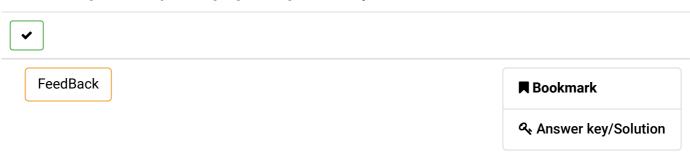


# 0.27

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

Language comprehension blooms when it's paired with specific events or activities. Diapering, bathing, feeding, dressing, and play time are daily routines that give parents and caregivers abundant opportunities to expose children to meaningful language. Through varied experiences geared to children's development and repeated rituals — like bedtime reading — children rapidly acquire language. Only 24 months on the planet and most kids grasp language. It's a gift you'll never be sorry you gave them.

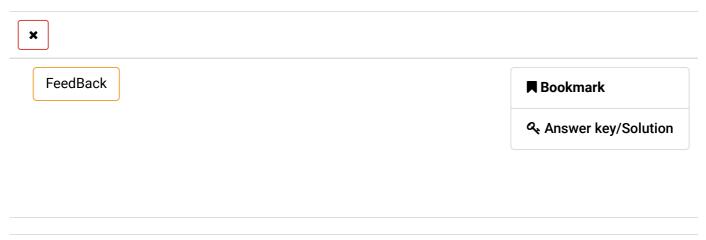
- 1. Understanding of language spurs when coupled with meaningful experiences.
- 2. Children develop language skills through experience.
- 3. Experiences during the first 2 years of life lay a foundation for language growth.
- 4. A child begins to decipher language during the first 2 year of his life.



## Q.28

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

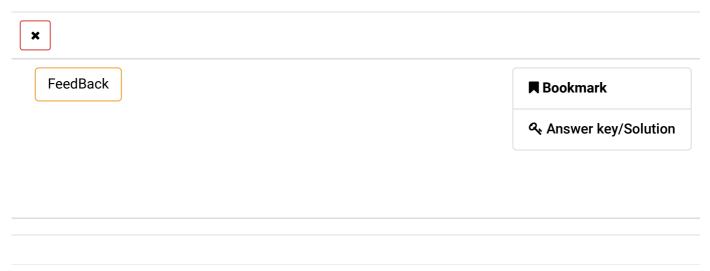
- 1. "There, the females that keep the cubs the extra year have the greatest advantage."
- 2. Mr. Swenson said: "A single female in Sweden is four times more likely to be shot as one with a cub."
- 3. While it would not normally be a good strategy from an evolutionary perspective, the female bears' increased survival chances largely counteracted the reduced birth rate.
- 4. The researchers found the unusual behavior was spreading through Swedish bear populations.
- 5. "This is especially true in areas of high hunting pressure," continued Mr. Swenson.



# 0.29

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.

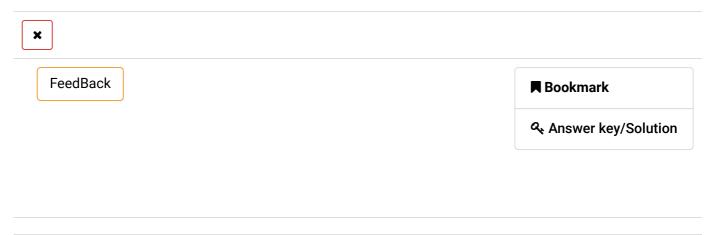
- 1. The findings add to a growing body of evidence that people travelled along a coastal route to move from Asia to North America at the time.
- 2. Measurements and enhanced photographs helped them identify the footprints of three different people, thought to be of two adults and a child, walking barefoot.
- 3. Footprints of people who lived 13,000 years ago have been discovered off the west coast of Canada, which scientists say could belong to the first North American settlers.
- 4. There at the end of the last ice age the sea level was two to three meters lower than it is today.
- 5. Researchers from the Hakai Institute and the University of Victoria in Canada excavated sites along the shoreline of Calvert Island in British Columbia.



## 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.

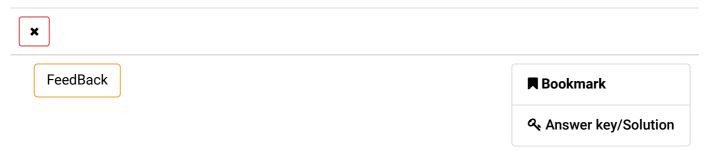
- 1. Since we started engineering polymers to make plastic on a mass scale in the 1950s, this byproduct of the petrochemical industry, which uses about 6% of all the oil we extract a year, has spread to myriad manufacturing processes.
- 2. When exposed to sunlight, oxygen or the action of waves, it doesn't biodegrade but simply fragments into smaller and smaller bits, until microscopic or nano-sized particles enter the food chain, the air, the soil and the water we drink.
- 3. We sleep on it, wear it, watch it, and are in direct bodily contact with it in one form or other all day and night.
- 4. Plastic is now ubiquitous, insidious and impossible to avoid.
- 5. It may have profound societal benefits, but this most successful of all manmade materials sticks around for centuries.



# 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.

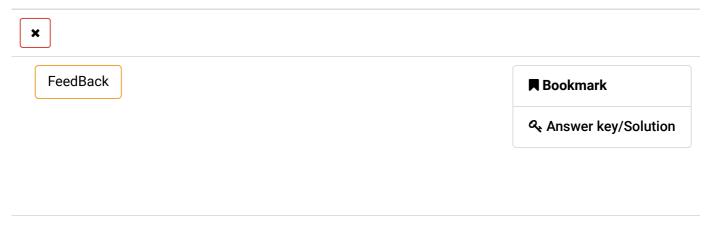
- 1. Three of them dealt with the prince's decision to pretend to be mad in order to conceal his plans for revenge.
- 2. John Casson was looking through the British Library's copy of François de Belleforest's Histoires Tragiques, a 1576 French text thought to have been one of the sources for Shakespeare's tragedy.
- 3. Annotations in the margins of a 16th-century text that is believed to have been one of the sources for Hamlet could have been made by Shakespeare himself, according to an independent researcher.
- 4. Casson noticed that faded ink symbols had been made in the margins next to six passages.
- 5. It features the story of how a Danish prince, Amleth, avenges his father's murder by his uncle, the latter going on to marry his mother, Geruthe.



## Q.32

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

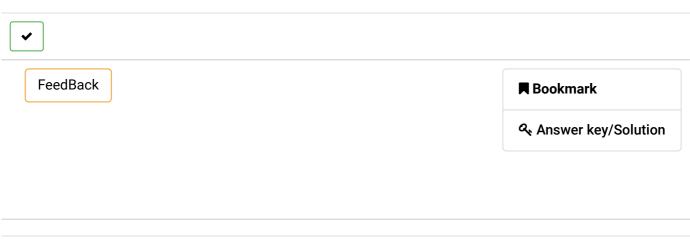
- 1. Working in the Brazilian state of MatoGrosso, a team led by archaeologists at the University of Exeter unearthed hundreds of villages hidden in the depths of the rainforest.
- 2. The discovery supports the theory that millions of people lived in the Amazon prior to the arrival of Europeans.
- 3. These excavations included evidence of fortifications and mysterious earthworks called geoglyphs.
- 4. Researchers have traditionally assumed ancient Amazonian communities stuck close to the region's river systems.
- 5. They eradicated much of the indigenous population through a combination of disease and warfare.



# Q.33

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

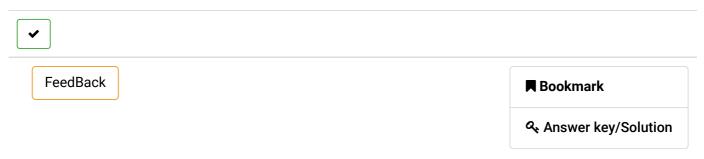
- 1. People's data has been collected to try and understand more about them and change how they vote.
- 2. Facebook has been engulfed in a growing scandal over the way it harvests data.
- 3. The problems began when it emerged that Cambridge Analytica, a political data company, had been using Facebook to gather information.
- 4. Amid the confusion, various claims have come from the companies involved and the activists and users who oppose them.
- 5. But it is quickly broadening out casting a light on the way data is gathered on Facebook more generally, and how it is used to sway people not only to buy things but to change how they vote and who runs the world.



# Q.34

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

- 1. He issued a statement on social media en route, admitting such behaviour was a "stain on the game".
- 2. Having been handed a 12-month ban and been sent home from South Africa by Cricket Australia, a devastated Smith touched down in Sydney on Thursday night and faced the music shortly afterwards in a highly-charged airport press conference room.
- 3. Steve Smith, struggling to contain his emotions and at one point breaking down completely, faced the cameras for the first time since being stripped of the Australian cricket captaincy to issue a heartfelt apology for his role in the ball tampering affair that has rocked the sport.
- 4. He repeatedly stated how "deeply sorry" he was for his actions, a sentiment Cameron Bancroft had expressed earlier in the evening when he landed in Perth and fronted the media.
- 5. The scandal has hit the team in the pocket, with naming rights sponsor Magellan pulling out of a major deal as naming rights sponsor on Thursday.



# Sec 2

Five countries –United States (US), United Kingdom (UK), Japan, Italy and Germany – had participated in an environment meet. There were four conferences organised in the meet, one on each of the four issues –Carbon Emission, Bio Hazards, Oil Spill and Radioactive. Each of the five countries has sent at least ten delegates to the meet. Also not more than five delegates from one country participated in one conference. Further it is known that:

- (i) The total number of delegates from the countries Japan, Italy and UK were different and in an Arithmetic Progression.
- (ii) In all the conferences except the one on Bio Hazards, number of delegates from US was more than that of any other country. But in conference on Bio Hazards, number of delegates from US was less than that of all other countries.
- (iii) In conference on Oil Spill, the number of delegates from Italy was the least while in conference on Carbon Emission, the number of delegates from UK was the least.
- (iv) Germany and Japan, each have sent 11 delegates and they didn't have the highest or the lowest delegates at any conference.
- (v) From Germany equal number of delegates participated only in Carbon Emission and Oil Spill, while from Japan the same number of delegates participated only in Radioactive and Bio Hazards.
- (vi) In the conference on Oil Spill and on Radioactive, the number of delegates participated from UK was equal.
- (vii) From Italy, distinct number of delegates participated in the conference on Bio Hazards and Carbon Emission.
- (viii) No delegate attends more than one conferences and no two countries had the same number of delegates at any conference.

| Q.35 Which country has the highest number of delegates in the conference on | Bio Hazards?          |
|---|-----------------------|
| 1 <b>US</b>   |                       |
| 2 O UK  |                       |
| 3 O Germany   |                       |
| 4 O Italy   |                       |
| x   |                       |
| FeedBack  | <b>■</b> Bookmark     |
|   | ا Answer key/Solution |

Five countries –United States (US), United Kingdom (UK), Japan, Italy and Germany – had participated in an environment meet. There were four conferences organised in the meet, one on each of the four issues –Carbon Emission, Bio Hazards, Oil Spill and Radioactive. Each of the five countries has sent at least ten delegates to the meet. Also not more than five delegates from one country participated in one conference. Further it is known that:

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- (vi) In the conference on Oil Spill and on Radioactive, the number of delegates participated from UK was equal.
- (vii) From Italy, distinct number of delegates participated in the conference on Bio Hazards and Carbon Emission.
- (viii) No delegate attends more than one conferences and no two countries had the same number of delegates at any conference.

| Q.36 Which country has the least number of delegates at the meet? |                     |
|---|---------------------|
| 1 <b>US</b>   |                     |
| 2 O UK  |                     |
| 3 O Germany   |                     |
| 4 O Italy   |                     |
| ×   |                     |
| FeedBack  | <b>■</b> Bookmark   |
|   | Answer key/Solution |

Five countries –United States (US), United Kingdom (UK), Japan, Italy and Germany – had participated in an environment meet. There were four conferences organised in the meet, one on each of the four issues –Carbon Emission, Bio Hazards, Oil Spill and Radioactive. Each of the five countries has sent at least ten delegates to the meet. Also not more than five delegates from one country participated in one conference. Further it is known that:

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- (iii) In conference on Oil Spill, the number of delegates from Italy was the least while in conference on Carbon Emission, the number of delegates from UK was the least.
- (iv) Germany and Japan, each have sent 11 delegates and they didn't have the highest or the lowest delegates at any conference.
- (v) From Germany equal number of delegates participated only in Carbon Emission and Oil Spill, while from Japan the same number of delegates participated only in Radioactive and Bio Hazards.
- (vi) In the conference on Oil Spill and on Radioactive, the number of delegates participated from UK was equal.
- (vii) From Italy, distinct number of delegates participated in the conference on Bio Hazards and Carbon Emission.
- (viii) No delegate attends more than one conferences and no two countries had the same number of delegates at any conference.

| Q.37 Which country has the 3rd highest number of delegates for Radioactive conference. | ence?                 |
|--|-----------------------|
| 1 <b>US</b>  |                       |
| 2 O UK   |                       |
| 3 O Germany  |                       |
| 4 ○ Japan  |                       |
| FeedBack   | <b>■</b> Bookmark     |
|  | م Answer key/Solution |

Five countries –United States (US), United Kingdom (UK), Japan, Italy and Germany – had participated in an environment meet. There were four conferences organised in the meet, one on each of the four issues –Carbon Emission, Bio Hazards, Oil Spill and Radioactive. Each of the five countries has sent at least ten delegates to the meet. Also not more than five delegates from one country participated in one conference. Further it is known that:

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- (vi) In the conference on Oil Spill and on Radioactive, the number of delegates participated from UK was equal.
- (vii) From Italy, distinct number of delegates participated in the conference on Bio Hazards and Carbon Emission
- (viii) No delegate attends more than one conferences and no two countries had the same number of delegates at any conference.

# Q.38

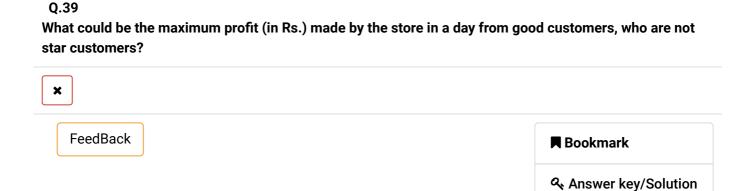
If Germany and Japan decided to join hands with each other, and hence be represented by the same delegates whose numbers are equivalent to the lower figure among their number of delegates sent to each conference, then how many total delegates would be there for the meet?

A confectionary store namely 'Railway Confectionary' at platform number 3 of New Delhi railway station sells ten types of appetizers –Juice, Water bottle, Snacks, Coffee, Milk Shake, Soda, Soft Drink, Burger, Patty and Cake. Store remains open from 8.00 a.m. to 8.00 p.m. everyday. The information about the cost price, selling price and the range of number of units that can be sold in a day is given below. Some cells of the table are left blank intentionally.

| Name         | Cost<br>Price<br>(in Rs.) | Selling<br>Price<br>(in Rs.) | Range of Sales<br>per day (units) |
|--------------|---------------------------|------------------------------|-----------------------------------|
| Juice        | 12                        |                              | 20 – 50                           |
| Water bottle | 11                        |                              | 30 – 50                           |
| Snacks       | 10                        |                              | 30 – 110                          |
| Coffee       | 8                         |                              | 20 – 50                           |
| Milk Shake   | 15                        |                              | 20-60                             |
| Soda         | 15                        | 18                           | 10 – 20                           |
| Soft Drink   | 18                        |                              | 10 – 50                           |
| Burger       | 18                        |                              | 30 – 100                          |
| Patty        | 9                         |                              | 20 – 100                          |
| Cake         | 14                        |                              | 10 – 50                           |

Some other information is as follows:

- (i) Selling price of any appetizer is not less than Rs. 8 but not more than Rs. 20. Also selling price of any appetizer is not less than its cost price.
- (ii) The store purchases all its items in the starting of the month.
- (iii) All transactions are in cash only.
- (iv) A person buys milk shake only when he buys Snacks; a person buys soft drink only when he buys milk shake. Each person buy exactly one unit of any appetizer.
- (v) A person purchasing any appetizer out of snacks, milk shake and soft drink is called good customer, and a customer purchasing all the three items is called as star customer.



A confectionary store namely 'Railway Confectionary' at platform number 3 of New Delhi railway station sells ten types of appetizers –Juice, Water bottle, Snacks, Coffee, Milk Shake, Soda, Soft Drink, Burger, Patty and Cake. Store remains open from 8.00 a.m. to 8.00 p.m. everyday. The information about the cost price, selling price and the range of number of units that can be sold in a day is given below. Some cells of the table are left blank intentionally.

| Name         | Cost<br>Price<br>(in Rs.) | Selling<br>Price<br>(in Rs.) | Range of Sales<br>per day (units) |
|--------------|---------------------------|------------------------------|-----------------------------------|
| Juice        | 12                        |                              | 20 – 50                           |
| Water bottle | 11                        |                              | 30 – 50                           |
| Snacks       | 10                        |                              | 30 – 110                          |
| Coffee       | 8                         |                              | 20 – 50                           |
| Milk Shake   | 15                        |                              | 20-60                             |
| Soda         | 15                        | 18                           | 10 – 20                           |
| Soft Drink   | 18                        |                              | 10 – 50                           |
| Burger       | 18                        |                              | 30 – 100                          |
| Patty        | 9                         |                              | 20 – 100                          |
| Cake         | 14                        |                              | 10 – 50                           |

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- (v) A person purchasing any appetizer out of snacks, milk shake and soft drink is called good customer, and a customer purchasing all the three items is called as star customer.

| Q.40 What could be the minimum percentage profit of the store for a day? |  |
|--|--|
| 1 <b>○ 0.375</b>   |  |
| 2 ○ 0.405  |  |
| 3 ○ 1.27   |  |
| 4 ○ 0  |  |
| ×  |  |

Answer key/Solution

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

A confectionary store namely 'Railway Confectionary' at platform number 3 of New Delhi railway station sells ten types of appetizers –Juice, Water bottle, Snacks, Coffee, Milk Shake, Soda, Soft Drink, Burger, Patty and Cake. Store remains open from 8.00 a.m. to 8.00 p.m. everyday. The information about the cost price, selling price and the range of number of units that can be sold in a day is given below. Some cells of the table are left blank intentionally.

| Name         | Cost<br>Price<br>(in Rs.) | Selling<br>Price<br>(in Rs.) | Range of Sales<br>per day (units) |
|--------------|---------------------------|------------------------------|-----------------------------------|
| Juice        | 12                        |                              | 20 – 50                           |
| Water bottle | 11                        |                              | 30 – 50                           |
| Snacks       | 10                        |                              | 30 – 110                          |
| Coffee       | 8                         |                              | 20 – 50                           |
| Milk Shake   | 15                        |                              | 20-60                             |
| Soda         | 15                        | 18                           | 10 – 20                           |
| Soft Drink   | 18                        |                              | 10 – 50                           |
| Burger       | 18                        |                              | 30 – 100                          |
| Patty        | 9                         |                              | 20 – 100                          |
| Cake         | 14                        |                              | 10 – 50                           |

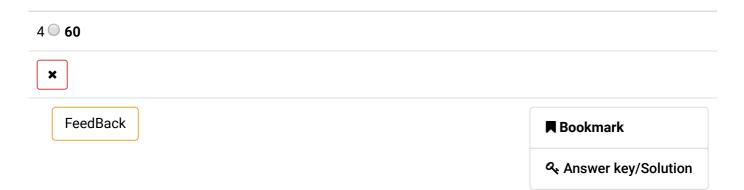
Some other information is as follows:

- (i) Selling price of any appetizer is not less than Rs. 8 but not more than Rs. 20. Also selling price of any appetizer is not less than its cost price.
- (ii) The store purchases all its items in the starting of the month.
- (iii) All transactions are in cash only.
- (iv) A person buys milk shake only when he buys Snacks; a person buys soft drink only when he buys milk shake. Each person buy exactly one unit of any appetizer.
- (v) A person purchasing any appetizer out of snacks, milk shake and soft drink is called good customer, and a customer purchasing all the three items is called as star customer.

# Q.41

If the selling price of every appetizer is same, what will be the approximate maximum percentage profit for a day?

- 1 0 50
- 2 0 64
- 3 0 42



A confectionary store namely 'Railway Confectionary' at platform number 3 of New Delhi railway station sells ten types of appetizers –Juice, Water bottle, Snacks, Coffee, Milk Shake, Soda, Soft Drink, Burger, Patty and Cake. Store remains open from 8.00 a.m. to 8.00 p.m. everyday. The information about the cost price, selling price and the range of number of units that can be sold in a day is given below. Some cells of the table are left blank intentionally.

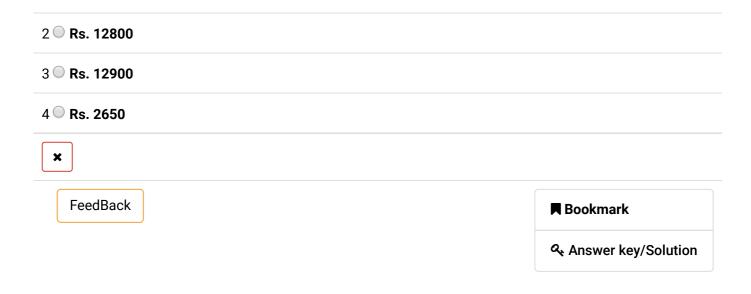
| Name         | Cost<br>Price<br>(in Rs.) | Selling<br>Price<br>(in Rs.) | Range of Sales<br>per day (units) |
|--------------|---------------------------|------------------------------|-----------------------------------|
| Juice        | 12                        |                              | 20 – 50                           |
| Water bottle | 11                        |                              | 30 – 50                           |
| Snacks       | 10                        |                              | 30 – 110                          |
| Coffee       | 8                         |                              | 20 – 50                           |
| Milk Shake   | 15                        |                              | 20-60                             |
| Soda         | 15                        | 18                           | 10-20                             |
| Soft Drink   | 18                        |                              | 10 – 50                           |
| Burger       | 18                        |                              | 30 – 100                          |
| Patty        | 9                         |                              | 20 – 100                          |
| Cake         | 14                        |                              | 10 – 50                           |

Some other information is as follows:

- (i) Selling price of any appetizer is not less than Rs. 8 but not more than Rs. 20. Also selling price of any appetizer is not less than its cost price.
- (ii) The store purchases all its items in the starting of the month.
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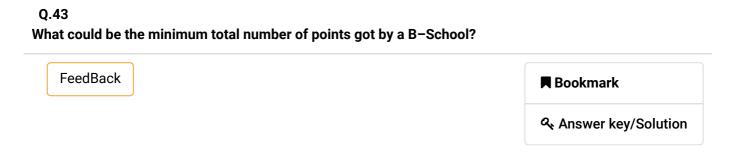
Q.42
Which of the following could be the total sales value for a day?

1 **Rs. 1600** 



A leading magazine conducted a survey of 4 B-Schools – S1, S2, S3 and S4 – based on the four different parameters – P1, P2, P3 and P4. In the survey, they awarded some points to the B-Schools on the different parameters. Sum of the points distributed to all the B-Schools in a parameter is equal for all the parameters. In every parameter, points got by the four B-Schools are in the form of four different Arithmetic Progressions . In any one of the four parameters, B-School getting highest point is ranked 1 and the one getting lowest point is ranked 4. It is also known that:

- (i) In any parameter, all the B-Schools were awarded distinct points.
- (ii) S3 was awarded 20 points in P1, and its rank is 3 in this parameter.
- (iii) Points awarded to any B-School in any of the four parameters is non-negative integers.

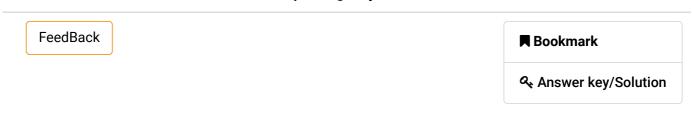


A leading magazine conducted a survey of 4 B-Schools – S1, S2, S3 and S4 – based on the four different parameters – P1, P2, P3 and P4. In the survey, they awarded some points to the B-Schools on the different parameters. Sum of the points distributed to all the B-Schools in a parameter is equal for all the parameters. In every parameter, points got by the four B-Schools are in the form of four different Arithmetic Progressions . In any one of the four parameters, B-School getting highest point is ranked 1 and the one getting lowest point is ranked 4. It is also known that:

- (i) In any parameter, all the B-Schools were awarded distinct points.
- (ii) S3 was awarded 20 points in P1, and its rank is 3 in this parameter.
- (iii) Points awarded to any B-School in any of the four parameters is non-negative integers.

# 0.44

What could be the maximum total number of points got by a B-School?



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

A leading magazine conducted a survey of 4 B-Schools – S1, S2, S3 and S4 – based on the four different parameters – P1, P2, P3 and P4. In the survey, they awarded some points to the B-Schools on the different parameters. Sum of the points distributed to all the B-Schools in a parameter is equal for all the parameters. In every parameter, points got by the four B-Schools are in the form of four different Arithmetic Progressions . In any one of the four parameters, B-School getting highest point is ranked 1 and the one getting lowest point is ranked 4. It is also known that:

- (i) In any parameter, all the B-Schools were awarded distinct points.
- (ii) S3 was awarded 20 points in P1, and its rank is 3 in this parameter.
- (iii) Points awarded to any B-School in any of the four parameters is non-negative integers.

# Q.45

If S4 got rank 4 in all the four parameters, then the total points awarded to S4 in all the four parameters put together cannot be more than

| 1 0 18 |  |  |
|--------|--|--|
| 2 0 58 |  |  |
| 3 0 72 |  |  |
| 4 0 82 |  |  |
|        |  |  |

FeedBack

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• Answer key/Solution

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

A leading magazine conducted a survey of 4 B-Schools – S1, S2, S3 and S4 – based on the four different parameters – P1, P2, P3 and P4. In the survey, they awarded some points to the B-Schools on the different parameters. Sum of the points distributed to all the B-Schools in a parameter is equal for all the parameters. In every parameter, points got by the four B-Schools are in the form of four different Arithmetic Progressions . In any one of the four parameters, B-School getting highest point is ranked 1 and the one getting lowest point is ranked 4. It is also known that:

- (i) In any parameter, all the B-Schools were awarded distinct points.
- (ii) S3 was awarded 20 points in P1, and its rank is 3 in this parameter.
- (iii) Points awarded to any B-School in any of the four parameters is non-negative integers.

Q.46
If sum of the points distributed to all the B−Schools in a parameter is minimum possible, then total points got by a B−school in all parameters is 'a'. What could be the maximum value of 'a'?

1 □ 120
2 □ 88
3 □ 106
4 □ 133

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Answer key/Solution

Five friends – A, B, C, D and E – were given certain number of packets of toffees by their parents. Each of them got different number of packets and each packet contains ten toffees. They all met under a tree and decided to exchange the toffees among themselves. Firstly A, B and D exchanged their packets amongst themselves so that no one of the three had their original number of toffees with them. Thereafter B, C and D exchanged their packets in the same manner (i.e. no one had their original number of toffees with them), and in the last C, D and E exchanged their packets in the same manner. Some additional information is given about the exchange.

- 1. Initially, E has the maximum number of toffees, which was not more than 60, but after all the exchange, E left with the minimum number of toffees, which was not less than 10.
- 2. Number of toffees with each of the friends after all exchanges was different from what they initially had.
- 3. Number of toffees with B and C after second exchange was 40 and 20 respectively.
- 4. After each exchange, no two friends have the same number of toffees.
- 5. Number of toffees with A, B and D after first exchange was 30, 10 and 20 respectively.
- 6. None of the friends has opened any packet before the final exchange.

# Q.47 If number of toffees with B initially, after first exchange, after second exchange and after third exchange was a, b, c and d respectively, then which of the following can be the value of (a + b + c + d)? 1 120 2 100 3 150 4 130 FeedBack R Bookmark Q Answer key/Solution

Five friends – A, B, C, D and E – were given certain number of packets of toffees by their parents. Each of them got different number of packets and each packet contains ten toffees. They all met under a tree and decided to exchange the toffees among themselves. Firstly A, B and D exchanged their packets amongst themselves so that no one of the three had their original number of toffees with them. Thereafter B, C and D exchanged their packets in the same manner (i.e. no one had their original number of toffees with them), and in the last C, D and E exchanged their packets in the same manner. Some additional information is given about the exchange.

- 1. Initially, E has the maximum number of toffees, which was not more than 60, but after all the exchange, E left with the minimum number of toffees, which was not less than 10.
- 2. Number of toffees with each of the friends after all exchanges was different from what they initially had.
- 3. Number of toffees with B and C after second exchange was 40 and 20 respectively.
- 4. After each exchange, no two friends have the same number of toffees.
- 5. Number of toffees with A, B and D after first exchange was 30, 10 and 20 respectively.
- 6. None of the friends has opened any packet before the final exchange.

### 0.48

For how many persons, number of toffees with them after third exchange can be determined uniquely?

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Answer key/Solution

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

Five friends – A, B, C, D and E – were given certain number of packets of toffees by their parents. Each of them got different number of packets and each packet contains ten toffees. They all met under a tree and decided to exchange the toffees among themselves. Firstly A, B and D exchanged their packets amongst themselves so that no one of the three had their original number of toffees with them. Thereafter B, C and D exchanged their packets in the same manner (i.e. no one had their original number of toffees with them), and in the last C, D and E exchanged their packets in the same manner. Some additional information is given about the exchange.

- 1. Initially, E has the maximum number of toffees, which was not more than 60, but after all the exchange, E left with the minimum number of toffees, which was not less than 10.
- 2. Number of toffees with each of the friends after all exchanges was different from what they initially had.
- 3. Number of toffees with B and C after second exchange was 40 and 20 respectively.
- 4. After each exchange, no two friends have the same number of toffees.
- 5. Number of toffees with A, B and D after first exchange was 30, 10 and 20 respectively.
- 6. None of the friends has opened any packet before the final exchange.

### Q.49

Which of the following is the number of toffees E initially had?

1 0 50

| 2 0 60              |                       |
|---------------------|-----------------------|
| 3 0 40              |                       |
| 4 either (1) or (2) |                       |
| FeedBack            | <b>■</b> Bookmark     |
|                     | ≪ Answer key/Solution |
|                     |                       |

Five friends – A, B, C, D and E – were given certain number of packets of toffees by their parents. Each of them got different number of packets and each packet contains ten toffees. They all met under a tree and decided to exchange the toffees among themselves. Firstly A, B and D exchanged their packets amongst themselves so that no one of the three had their original number of toffees with them. Thereafter B, C and D exchanged their packets in the same manner (i.e. no one had their original number of toffees with them), and in the last C, D and E exchanged their packets in the same manner. Some additional information is given about the exchange.

- 1. Initially, E has the maximum number of toffees, which was not more than 60, but after all the exchange, E left with the minimum number of toffees, which was not less than 10.
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- 4. After each exchange, no two friends have the same number of toffees.
- 5. Number of toffees with A, B and D after first exchange was 30, 10 and 20 respectively.
- 6. None of the friends has opened any packet before the final exchange.

Q.50

Which of the following statements is sufficient to find out the number of toffees with each of the five friends initially, after first exchange, after second exchange and after third exchange?

friends initially, after first exchange, after second exchange and after third exchange?

1 © C initially had 40 toffees.

2 © Initially difference between number of toffees with A and E was 40.

3 © Initially difference between number of toffees with A and C was 30.

4 © None of these

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Q Answer key/Solution

There are five athletes - Raman, Tara, Harjinder, Karan and Vishal - who participated in a unique type of race of length 3km. In the race, they covered the distance in three ways i.e., by running, walking and jumping. They covered the distance by using all the three ways. Some additional information about the race is as follows:

- 1. Each of the five athletes took different time (in minutes) to cover the total distance.
- 2. Each of the five athletes spent equal time on each of the three ways to cover the distance. For example, If an athlete A spent x minutes on running, then the time spent by him on walking and jumping each is also x minutes.
- 3. Total time (in minutes) spent by each of the five athletes was an integral multiple of 3.
- 4. Race is finished when all the athletes covered the total distance of 3km.
- 5. Average speed (in meter per minute) for each of the five athletes was a positive integer.
- 6. Total time taken (in minutes) by each of the five athletes is a three digit number.

The following table provides us with the relative speed of the five athletes, where rank 1 being the fastest athlete and rank 5 being the slowest athlete.

| Rank    | 1         | 2     | 3         | 4      | 5         |
|---------|-----------|-------|-----------|--------|-----------|
| Running | Harjinder | Raman | Karan     | Tara   | Vishal    |
| Walking | Tara      | Karan | Raman     | Vishal | Harjinder |
| Jumping | Karan     | Tara  | Harjinder | Raman  | Vishal    |

Q.51
Which of the following cannot be the value of sum of average speed of all the five athletes?

1 ○ 72

2 ○ 68

3 ○ 52

4 ○ 47

FeedBack

■ Bookmark

Answer key/Solution

There are five athletes - Raman, Tara, Harjinder, Karan and Vishal - who participated in a unique type of race of length 3km. In the race, they covered the distance in three ways i.e., by running, walking and jumping. They covered the distance by using all the three ways. Some additional information about the race is as follows:

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| Rank    | 1         | 2     | 3         | 4      | 5         |
|---------|-----------|-------|-----------|--------|-----------|
| Running | Harjinder | Raman | Karan     | Tara   | Vishal    |
| Walking | Tara      | Karan | Raman     | Vishal | Harjinder |
| Jumping | Karan     | Tara  | Harjinder | Raman  | Vishal    |

There are five athletes - Raman, Tara, Harjinder, Karan and Vishal - who participated in a unique type of race of length 3km. In the race, they covered the distance in three ways i.e., by running, walking and jumping. They covered the distance by using all the three ways. Some additional information about the race is as follows:

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The following table provides us with the relative speed of the five athletes, where rank 1 being the fastest athlete and rank 5 being the slowest athlete.

| Rank    | 1         | 2     | 3         | 4      | 5         |
|---------|-----------|-------|-----------|--------|-----------|
| Running | Harjinder | Raman | Karan     | Tara   | Vishal    |
| Walking | Tara      | Karan | Raman     | Vishal | Harjinder |
| Jumping | Karan     | Tara  | Harjinder | Raman  | Vishal    |

# Q.53

If the time taken to finish the race is maximum possible, and the speed of all the five athletes was integer (in meter per minute) during all the three ways, find the maximum speed (in meter per minute), when running, of the player who finished last?

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Answer key/Solution

There are five athletes - Raman, Tara, Harjinder, Karan and Vishal - who participated in a unique type of race of length 3km. In the race, they covered the distance in three ways i.e., by running, walking and jumping. They covered the distance by using all the three ways. Some additional information about the race is as follows:

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| Rank    | 1         | 2     | 3         | 4      | 5         |
|---------|-----------|-------|-----------|--------|-----------|
| Running | Harjinder | Raman | Karan     | Tara   | Vishal    |
| Walking | Tara      | Karan | Raman     | Vishal | Harjinder |
| Jumping | Karan     | Tara  | Harjinder | Raman  | Vishal    |

Q.54
The minimum time (in minutes) taken by the athlete who finished third is

1 ○ 375

2 ○ 300

3 ○ 120

4 ○ 150

FeedBack

RedBack

RedBack

Answer key/Solution

ABC school takes in a total of 200 students every year for admissions in class 3rd to 10th. Out of which, 60% are girls and rest are boys. Out of the 200 seats available in the school, 45% are reserved for the under privileged students, and 15% reserved for the children of defence families. From a family maximum 2 children can get admission in that school. If the applications are more than the intake, lottery will be done keeping in mind the above mentioned constraints. The following table provides the details of the applications submitted for the April' 2018 session:

| Categories          | Number of<br>Families | Boys | Girls |
|---------------------|-----------------------|------|-------|
| Under<br>privileged | 100                   | 74   | 52    |
| Defence             | 40                    | 18   | 34    |
| Others              | 75                    | 50   | 44    |

Even after knowing that maximum of only 2 children per family could get admission in the school, 20 families, who had 3 children, still submitted the application for all of them.

| Q.55 What can be the minimum number of families with only a girl child who also got selected? |                       |  |  |  |
|---|-----------------------|--|--|--|
| 1 0 46  |                       |  |  |  |
| 2 🔾 36  |                       |  |  |  |
| 3 ○ 26  |                       |  |  |  |
| 4 🔾 12  |                       |  |  |  |
| FeedBack  | <b>■</b> Bookmark     |  |  |  |
|   | م Answer key/Solution |  |  |  |

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| Defence             | 40                    | 18   | 34    |
| Others              | 75                    | 50   | 44    |

Even after knowing that maximum of only 2 children per family could get admission in the school, 20 families, who had 3 children, still submitted the application for all of them.

| Q.56 What can be the maximum number of under privileged families with 2 children and both selected? |                       |  |  |  |
|---|-----------------------|--|--|--|
| 1 0 10  |                       |  |  |  |
| 2 🔾 13  |                       |  |  |  |
| 3 ○ 16  |                       |  |  |  |
| 4 🔾 5   |                       |  |  |  |
| FeedBack  | <b>■</b> Bookmark     |  |  |  |
|   | م Answer key/Solution |  |  |  |

ABC school takes in a total of 200 students every year for admissions in class 3rd to 10th. Out of which, 60% are girls and rest are boys. Out of the 200 seats available in the school, 45% are reserved for the under privileged students, and 15% reserved for the children of defence families. From a family maximum 2 children can get admission in that school. If the applications are more than the intake, lottery will be done keeping in mind the above mentioned constraints. The following table provides the details of the applications submitted for the April' 2018 session:

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|---------------------|-----------------------|------|-------|
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| Defence             | 40                    | 18   | 34    |
| Others              | 75                    | 50   | 44    |

Even after knowing that maximum of only 2 children per family could get admission in the school, 20 families, who had 3 children, still submitted the application for all of them.

| Q.57 What is the maximum number of families with two children in 'others' categor was selected? | y, out of which only 1 child |
|---|------------------------------|
| 1 0 7   |                              |
| 2 🔾 11  |                              |
| 3 O 13  |                              |
| 4 🔾 5   |                              |
| FeedBack  | <b>■</b> Bookmark            |
|   | م Answer key/Solution        |

ABC school takes in a total of 200 students every year for admissions in class 3rd to 10th. Out of which, 60% are girls and rest are boys. Out of the 200 seats available in the school, 45% are reserved for the under privileged students, and 15% reserved for the children of defence families. From a family maximum 2 children can get admission in that school. If the applications are more than the intake, lottery will be done keeping in mind the above mentioned constraints. The following table provides the details of the applications submitted for the April' 2018 session:

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| Under<br>privileged | 100                   | 74   | 52    |
| Defence             | 40                    | 18   | 34    |
| Others              | 75                    | 50   | 44    |

Even after knowing that maximum of only 2 children per family could get admission in the school, 20 families, who had 3 children, still submitted the application for all of them.

| Q.58<br>What is the maximum possible number of male child selected from d | efence family?        |
|---|-----------------------|
| 1 0 10  |                       |
| 2 🔾 12  |                       |
| 3 ○ 8   |                       |
| 4 🔾 6   |                       |
| FeedBack  | <b>■</b> Bookmark     |
|   | م Answer key/Solution |

The head of Swachh Bharat Mission, B. Chandraleka, set up a mission to make India a dumping yard free society. She picked up five scientists of various domains and origins to frame a master plan.

The scientists chosen by her were Rama, Bupa, Peter, Maku and Sayeed with their specialization in leachate reduction, afforestation, debugging, water science, and environment sustainability, not necessarily in the same order.

They purchased their experimental equipments from Denmark, California, Libya, Nigeria and Kenya of different colors from Black, Red, Yellow, White and Grey, in any order.

Some of them worked for NAMO and the remaining for RAGA.

- (i) The one who specialised in environment sustainability purchased his equipment from Denmark.
- (ii) Both, the afforestation scientist and the one whose equipments are white in color, worked for RAGA.
- (iii) Peter is neither an afforestation scientist nor he purchased his equipments from Libya.
- (iv) Maku, a leachate reduction scientist, worked for RAGA
- (v) Bupa worked for NAMO.
- (vi) All three persons the one whose equipments are grey, the one who purchased his equipments from Libya and the one who purchased his equipments from Nigeria, worked for NAMO.
- (vii) The afforestation scientist has yellow color equipments.
- (viii) Rama's equipments are neither yellow nor grey.
- (ix) Neither Bupa nor Rama is a water scientist.
- (x) Sayeed's equipments are not from California.
- (xi) The one whose specialization is in debugging don't have red equipments.

| Q.59   |                       |
|--|-----------------------|
| Which of the following scientists worked for RAGA? |                       |
| 1 O Peter and Rama                                 |                       |
| 2 O Sayeed and Rama                                |                       |
| 3 ○ Sayeed and Maku                                |                       |
| 4 O Maku and Peter                                 |                       |
| FeedBack   | <b>■</b> Bookmark     |
|  | م Answer key/Solution |

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- (ix) Neither Bupa nor Rama is a water scientist.
- (x) Sayeed's equipments are not from California.
- (xi) The one whose specialization is in debugging don't have red equipments.

| Q.60 Who specialised in environment sustainability? |                       |
|---|-----------------------|
| 1 O Bupa  |                       |
| 2 O Rama  |                       |
| 3 O Peter   |                       |
| 4 Cannot be determined                              |                       |
| x   |                       |
| FeedBack  | <b>■</b> Bookmark     |
|   | & Answer key/Solution |

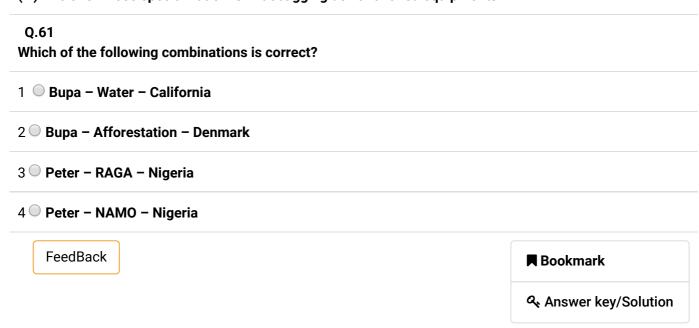
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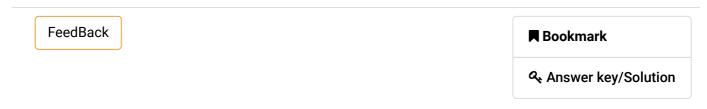
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- (viii) Rama's equipments are neither yellow nor grey.
- (ix) Neither Bupa nor Rama is a water scientist.
- (x) Sayeed's equipments are not from California.
- (xi) The one whose specialization is in debugging don't have red equipments.

| Q.62 The scientists who worked for NAMO have equipments of which color? |                       |
|---|-----------------------|
| 1 Red, Black, Yellow  |                       |
| 2 O Grey, Red, Yellow   |                       |
| 3 ○ Grey, Black, Red  |                       |
| 4 O Yellow, White, Grey   |                       |
| FeedBack  | ■ Bookmark            |
|   | 4 Answer key/Solution |

In a group of 300 people, 170 drink alcohol, 140 smoke, and 100 people chew tobacco. Everyone belongs to at least one of the 3 aforementioned categories. All those people who drink alcohol, also play Poker. All those people who smoke, also play Black Jack. All those people who chew tobacco, also play Roulette. Out of those group of 300 people, 210 play Poker, 170 play Black Jack and 220 play Roulette. No one play all the 3 games, and everyone plays at least one of the 3 games.

# Q.63 What can be the maximum number of persons who drink alcohol and also play both Poker and Black Jack?



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

In a group of 300 people, 170 drink alcohol, 140 smoke, and 100 people chew tobacco. Everyone belongs to at least one of the 3 aforementioned categories. All those people who drink alcohol, also play Poker. All those people who smoke, also play Black Jack. All those people who chew tobacco, also play Roulette. Out of those group of 300 people, 210 play Poker, 170 play Black Jack and 220 play Roulette. No one play all the 3 games, and everyone plays at least one of the 3 games.

# Q.64 What can be the maximum number of persons who smoke and also play Poker? 1 170 2 140 3 210 4 80 FeedBack R Bookmark Answer key/Solution

In a group of 300 people, 170 drink alcohol, 140 smoke, and 100 people chew tobacco. Everyone belongs to at least one of the 3 aforementioned categories. All those people who drink alcohol, also play Poker. All those people who smoke, also play Black Jack. All those people who chew tobacco, also play Roulette. Out of those group of 300 people, 210 play Poker, 170 play Black Jack and 220 play Roulette. No one play all the 3 games, and everyone plays at least one of the 3 games.

# Q.65 What can be the maximum number of persons who drink as well as smoke, and also play Roulette?

| <b>■</b> Bookmark     |
|-----------------------|
| <b>■</b> Bookmark     |
| م Answer key/Solution |

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

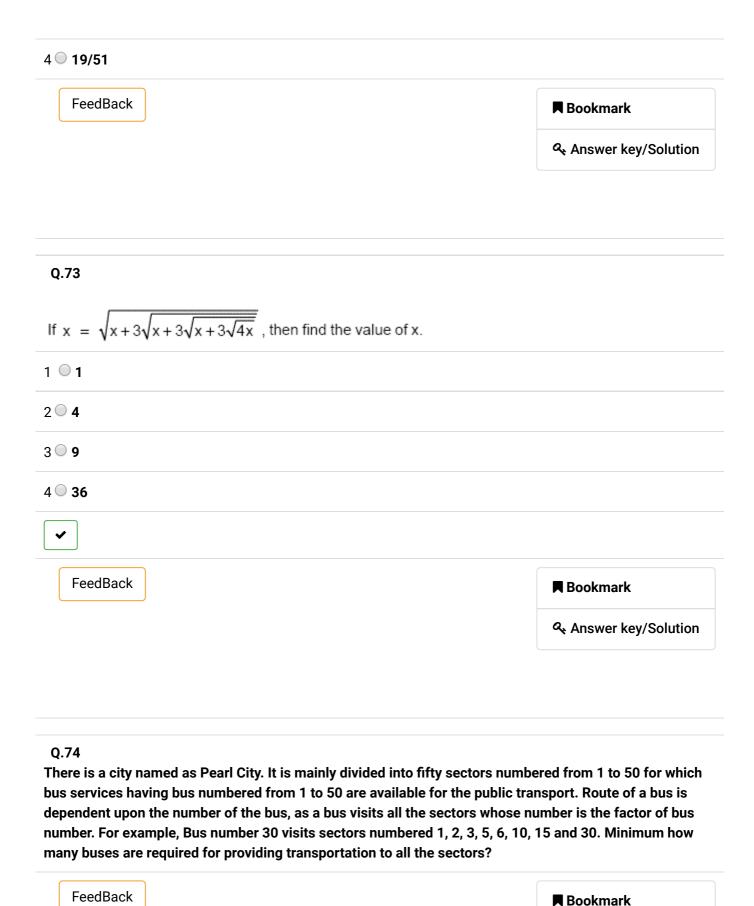
In a group of 300 people, 170 drink alcohol, 140 smoke, and 100 people chew tobacco. Everyone belongs to at least one of the 3 aforementioned categories. All those people who drink alcohol, also play Poker. All those people who smoke, also play Black Jack. All those people who chew tobacco, also play Roulette. Out of those group of 300 people, 210 play Poker, 170 play Black Jack and 220 play Roulette. No one play all the 3 games, and everyone plays at least one of the 3 games.

| Q.66<br>What can be the minimum number of persons who smoke but do not play Roule | ette?                  |
|---|------------------------|
| 1 90  |                        |
| 2 🔾 50  |                        |
| 3 🔾 140   |                        |
| 4 🔾 80  |                        |
| FeedBack  | <b>■</b> Bookmark      |
|   | વ્ Answer key/Solution |

# Sec 3

| © 57  © 77  © 58  © Cannot be determined  FeedBack  © Cannot be determined  FeedBack  © Answer key/Solution  © Students of a class took French, 35 took Spanish and 20 took German language. 5 students took all hree languages. 15 took both French and Spanish, 10 took both French and German, and 5 took both Serman and Spanish. Find the total number of students in the class, if each student of the class took at east one of the languages.  FeedBack  © Answer key/Solution  G.69  If x⁴ − 119x² + 1 = 0, where 'x' is a positive real number, then find the value of x³ + 1/x³.  FeedBack  © Answer key/Solution  | Q.67<br>In how many ways can 575 be written as sum of five terms of an Ar<br>the five terms of the AP are positive integers?  | ithmetic Progression (AP), such that al  |
|---|---|--|
| G.68  G.68  G.68  Students of a class took French, 35 took Spanish and 20 took German language. 5 students took all hree languages. 15 took both French and Spanish, 10 took both French and German, and 5 took both German and Spanish. Find the total number of students in the class, if each student of the class took at east one of the languages.  FeedBack  G.69  If $x^4 - 119x^2 + 1 = 0$ , where 'x' is a positive real number, then find the value of $x^2 + \frac{1}{x^3}$ .  FeedBack  FeedBack   | 1 0 57  |  |
| FeedBack    Bookmark  | 2 0 77  |  |
| FeedBack  Q. Answer key/Solution  Q. 68 5 students of a class took French, 35 took Spanish and 20 took German language. 5 students took all bree languages. 15 took both French and Spanish, 10 took both French and German, and 5 took both ferman and Spanish. Find the total number of students in the class, if each student of the class took at least one of the languages.    ■ Bookmark   ■ Bookma | ○ 58  |  |
| Q.68 5 students of a class took French, 35 took Spanish and 20 took German language. 5 students took all pree languages. 15 took both French and Spanish, 10 took both French and German, and 5 took both terman and Spanish. Find the total number of students in the class, if each student of the class took at east one of the languages.  **   | Cannot be determined  |  |
| Q.68 5 students of a class took French, 35 took Spanish and 20 took German language. 5 students took all bree languages. 15 took both French and Spanish, 10 took both French and German, and 5 took both iterman and Spanish. Find the total number of students in the class, if each student of the class took at least one of the languages.  FeedBack  RedBack  | FeedBack  | <b>■</b> Bookmark  |
| 5 students of a class took French, 35 took Spanish and 20 took German language. 5 students took all bree languages. 15 took both French and Spanish, 10 took both French and German, and 5 took both German and Spanish. Find the total number of students in the class, if each student of the class took at east one of the languages.  FeedBack  G. Answer key/Solution  G. 69  If $x^4 - 119x^2 + 1 = 0$ , where 'x' is a positive real number, then find the value of $x^3 + \frac{1}{x^3}$ .  FeedBack  FeedBack  |   | ه Answer key/Solution  |
| Q.69  If $x^4 - 119x^2 + 1 = 0$ , where 'x' is a positive real number, then find the value of $x^3 + \frac{1}{x^3}$ .  FeedBack  Rookmark   |   |  |
| FeedBack Rookmark   | 5 students of a class took French, 35 took Spanish and 20 took Geree languages. 15 took both French and Spanish, 10 took both French and Spanish. Find the total number of students in the class ast one of the languages.  | ench and German, and 5 took both , if each student of the class took at  Bookmark  |
| A Bookinark   | 5 students of a class took French, 35 took Spanish and 20 took Genree languages. 15 took both French and Spanish, 10 took both French and Spanish. Find the total number of students in the class east one of the languages.  *  FeedBack  Q.69   | Rench and German, and 5 took both  If each student of the class took at  Bookmark  Answer key/Solution   |
|   | 5 students of a class took French, 35 took Spanish and 20 took Genree languages. 15 took both French and Spanish, 10 took both French and Spanish. Find the total number of students in the class east one of the languages.  FeedBack  Q.69  If $x^4 - 119x^2 + 1 = 0$ , where 'x' is a positive real number, the class are considered as a constant of the languages. | Reach student of the class took at  Reach student of the class took at |

| Q.70<br>If two vertices of a rhombus are (3,0) and (4,5), and $x = 3$ and $x = 5y = -21$ , then find the fourth vertex.   | the third vertex lies on the point of intersection of $x + y$   |
|---|---|
| 1 (-1, 3)   |   |
| 2 (-2, -4)  |   |
| 3 (-1, -3)  |   |
| 4 (-2, -1)  |   |
| •   |   |
| FeedBack  | <b>■</b> Bookmark   |
|   | م Answer key/Solution   |
|   |   |
|   |   |
| Q.71  If a real valued function is defined as $f(x) = 2^{(x^2-3)^3}$  | $\frac{3}{1+27}$ , then find the maximum possible value of $\frac{16}{f(x)}$ .  |
|   | $\frac{3}{100}$ , then find the maximum possible value of $\frac{16}{f(x)}$ .   |
| If a real valued function is defined as $f(x) = 2^{(x^2-3)^3}$  | $\frac{16}{f(x)}$ , then find the maximum possible value of $\frac{16}{f(x)}$ .   |
| If a real valued function is defined as $f(x) = 2^{(x^2-3)^3}$  | T(X)  |
| If a real valued function is defined as $f(x) = 2^{(x^2-3)^3}$  | T(X)  ■ Bookmark  |
| If a real valued function is defined as f(x) = 2 <sup>(x²-3)³</sup> ✓  FeedBack  Q.72 In a deck of 52 cards, Ace is considered as the higher  | Bookmark  Answer key/Solution  est valued card. Two players play a game in which each alue card wins. If both the players have the same value |
| Q.72 In a deck of 52 cards, Ace is considered as the higher player picks a card, and the player with the higher vacard it will be considered as a tie. If the first player p                              | Bookmark  Answer key/Solution  est valued card. Two players play a game in which each alue card wins. If both the players have the same value |
| Q.72 In a deck of 52 cards, Ace is considered as the higher player picks a card, and the player with the higher vacard it will be considered as a tie. If the first player player will not lose the game? | Bookmark  Answer key/Solution  est valued card. Two players play a game in which each alue card wins. If both the players have the same value |



Answer key/Solution

# Q.75 In the figure given below, O is the centre of the circle. If $\angle$ OCD = 25° and $\angle$ OAD is 30°, then find the value of ∠ABC (in degrees). D Ο В FeedBack **■** Bookmark Answer key/Solution Q.76 The longest diagonal of a cube is approx what percentage of the diagonal of any of its face? 1 0 81 2 **131** 3 **122.5** 4 0 114 FeedBack **■** Bookmark Answer key/Solution

# Q.77

Ashok, Kiran and Vignesh are set out to do some work. Ashok can do the work in as much time as Kiran and Vignesh can do while working together. Kiran can do the work alone in 12 days more than the days in which Ashok would do the work alone, while Vignesh can work twice as fast as Kiran. If Shirin joins the work on the second day and the work is finished on that day itself, find out how many days would Shirin take to complete the whole work by herself?

| 5 ID I  |   |
|---|---|
| FeedBack  | <b>■</b> Bookmark                                 |
|   | م Answer key/Solution                             |
|   |   |
|   |   |
| Q.78 Which of the following statements is false?  |   |
| [Note: Here inscribed means all the vertices of the inscribed   | figure lie on the sides of the other figure.]     |
| 1 A triangle can be inscribed in any rectangle  |   |
| 2 A square can be inscribed in any trapezium  |   |
| 3 An octagon can be inscribed in any triangle   |   |
| 4 A pentagon can be inscribed in any hexagon  |   |
| FeedBack  | <b>■</b> Bookmark                                 |
|   | م Answer key/Solution                             |
|   |   |
|   |   |
| Q.79 Abhijit bought 100 HCC's shares at Rs. 157 each, 10 Reliand India's shares at Rs. 1560 each, and 5 Jindal Steel's shares at Rs.161, Rs.957, Rs.1559 and Rs.3800 per share respectively loss is | at Rs. 3350 each. If he sold all these shares for |
| 1 O 3% Loss   |   |
| 2 O 5% Profit   |   |
| 3 ○ <b>3</b> % Profit   |   |
| 4 ○ 5% Loss   |   |

| •   |  |   |
|---|--|---|
| FeedBack  |  | <b>■</b> Bookmark   |
|   |  | م Answer key/Solution   |
| Q.80<br>0.55555)a + (0.55555  | )b = (0.44444)c. where a                                 | b, c are natural numbers, and also c is a                                       |
|   |  | s (a, b, c), when value of 'c' is minimum.                                      |
| FeedBack  |  | <b>■</b> Bookmark   |
|   |  | م Answer key/Solution   |
| he sum of the digits of a 3-c<br>hen you subtract the origina   |  | s are in Geometric Progression. Also<br>by reversing the digits of the original |
| he sum of the digits of a 3-c<br>when you subtract the original<br>umber, you get 594. Find the   | al number from the number obtained                       |   |
| he sum of the digits of a 3-c<br>when you subtract the origina  | al number from the number obtained                       |   |
| when you subtract the original umber, you get 594. Find the   | al number from the number obtained                       | by reversing the digits of the original   |
| The sum of the digits of a 3-cooknen you subtract the original umber, you get 594. Find the FeedBack  | al number from the number obtained                       | Bookmark  |
| the sum of the digits of a 3-cyhen you subtract the original umber, you get 594. Find the FeedBack  Q.82  low many real solutions will $(X - 3)^2 + (Y - 4)^2 = 16$ ;       | al number from the number obtained<br>e original number. | Bookmark  Answer key/Solution   |
| he sum of the digits of a 3-chen you subtract the original umber, you get 594. Find the FeedBack  Q.82  ow many real solutions will $(-3)^2 + (Y-4)^2 = 16;$ $+ Y + 2 = 0$  | al number from the number obtained<br>e original number. | Bookmark  |
| he sum of the digits of a 3-chen you subtract the original number, you get 594. Find the FeedBack  Q.82  ow many real solutions will $(-3)^2 + (Y-4)^2 = 16;$ $+ Y + 2 = 0$ | al number from the number obtained<br>e original number. | Bookmark  |

FeedBack

**■** Bookmark

♠ Answer key/Solution

Q.83

From a fraction  $\left(\frac{X}{Y}\right)$  two new fractions are formed, one by adding 2 to the numerator and subtracting 1 from the denominator, and the other one by subtracting 1 from the numerator and adding 2 to the denominator. Product of the resultant two fractions is  $\frac{5}{27}$ . Also, if the fraction  $\left(\frac{X}{Y}\right)$  is added to its reciprocal the result is  $\frac{58}{21}$ . Find  $\left(\frac{X}{Y}\right)$ .

- 1 0 1/7
- 2 **2/7**
- 3 **3/7**
- 4 0 4/7

FeedBack

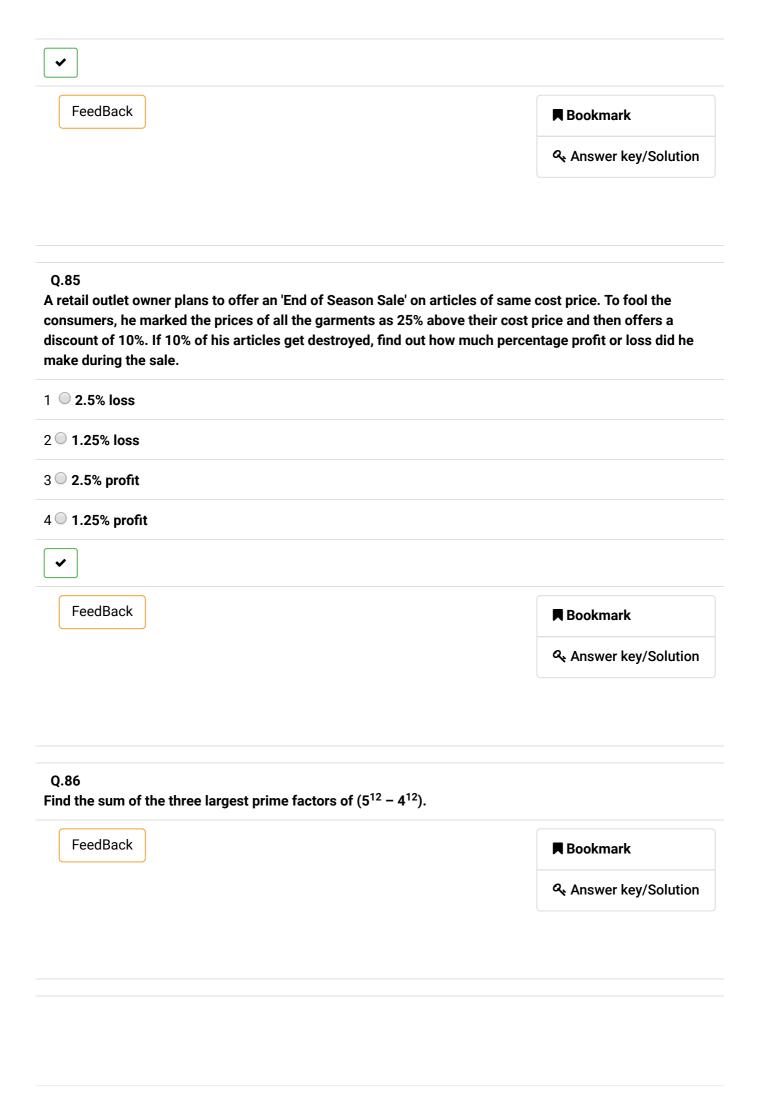
**■** Bookmark

Answer key/Solution

Q.84

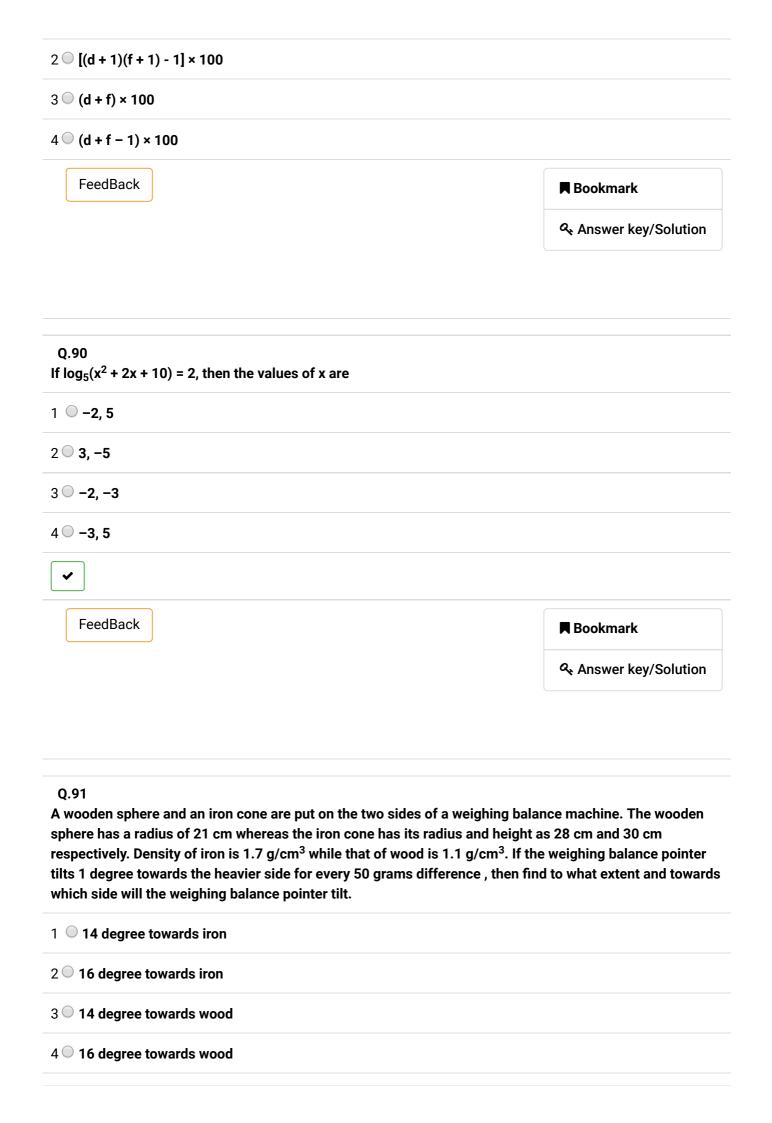
A cylindrical tank gets filled at 88 cubic cm per hour. The level of water in the tank rises at the rate of 7 cm per hour. Find the radius (in cm) of the tank.

- 1 0 1.414
- 2 0 2
- 3 0 4
- 4 0 8



| Q.87 A "prime time" is defined as a digital display which indicates time only when both hours and minutes are a prime number, on a twelve hour clock. Which of the following is the number of minutes in a day on which the "prime time" has shown the time? |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| 1 0 85   |  |  |  |  |  |  |
| 2 0 144  |  |  |  |  |  |  |
| 3 🔾 170  |  |  |  |  |  |  |
| 4 🔾 25   |  |  |  |  |  |  |
| ×  |  |  |  |  |  |  |
| FeedBack   | <b>■</b> Bookmark                                      |  |  |  |  |  |
|  | & Answer key/Solution                                  |  |  |  |  |  |
| Q.88  P, Q and R are the roots of the equation $x^3 + bx^2 + cx + d = 0$ , and are positive int $Q^2 + R^2 = 125$ , then which of the following can be the value of 'c'?   | tegers. If P <sup>2</sup> + Q <sup>2</sup> = 221 and   |  |  |  |  |  |
| 1 0 -152   |  |  |  |  |  |  |
| 2 <b>215</b>   |  |  |  |  |  |  |
| 3 ○ 550  |  |  |  |  |  |  |
| 4 🔾 -26  |  |  |  |  |  |  |
| FeedBack   | <b>■</b> Bookmark                                      |  |  |  |  |  |
|  | & Answer key/Solution                                  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Q.89 Find the percentage increase in the number of factors of $A = a^b$ , when A is mult c and e are prime numbers.  | iplied by c <sup>d</sup> and e <sup>f</sup> , where a, |  |  |  |  |  |

1 (d + 1)(f + 1) × 100



# Q.92

N is a natural number such that N/7 is a perfect square and N/11 is a perfect cube. Which of the following can be the number of factors of N?

- 1 0 66
- 2 **120**
- 3 0 140
- 4 0 80

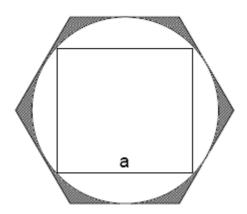
FeedBack

**■** Bookmark

Answer key/Solution

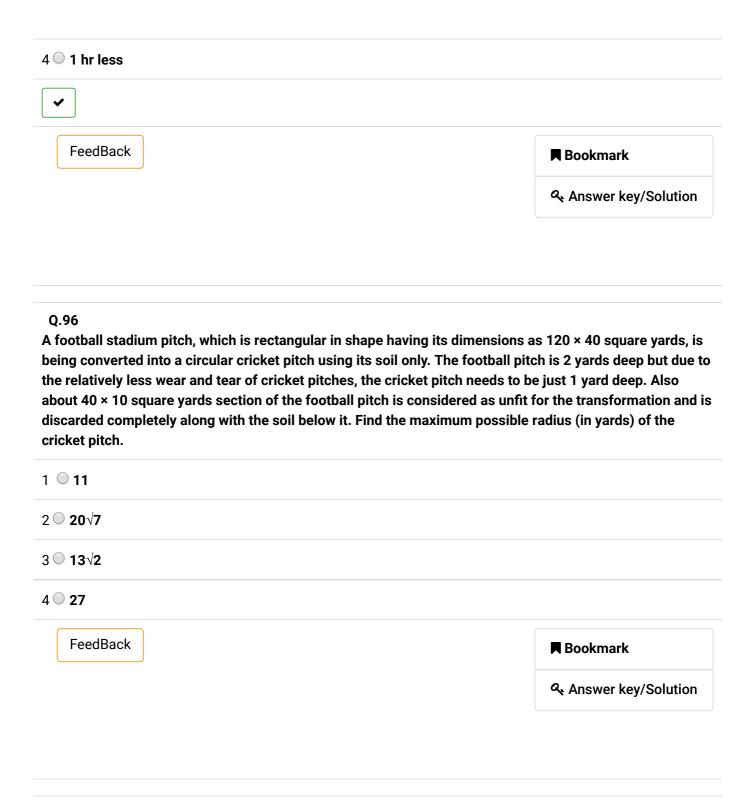
# Q.93

A circle is inscribed in a regular hexagon and further a square of side 'a' is inscribed inside that circle as shown in the figure below. Find the area of the shaded region.



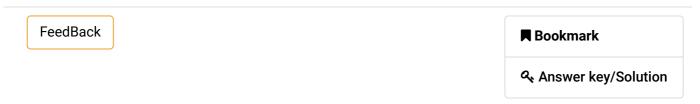
$$a\left(\sqrt{3}-\frac{\pi}{2}\right)$$

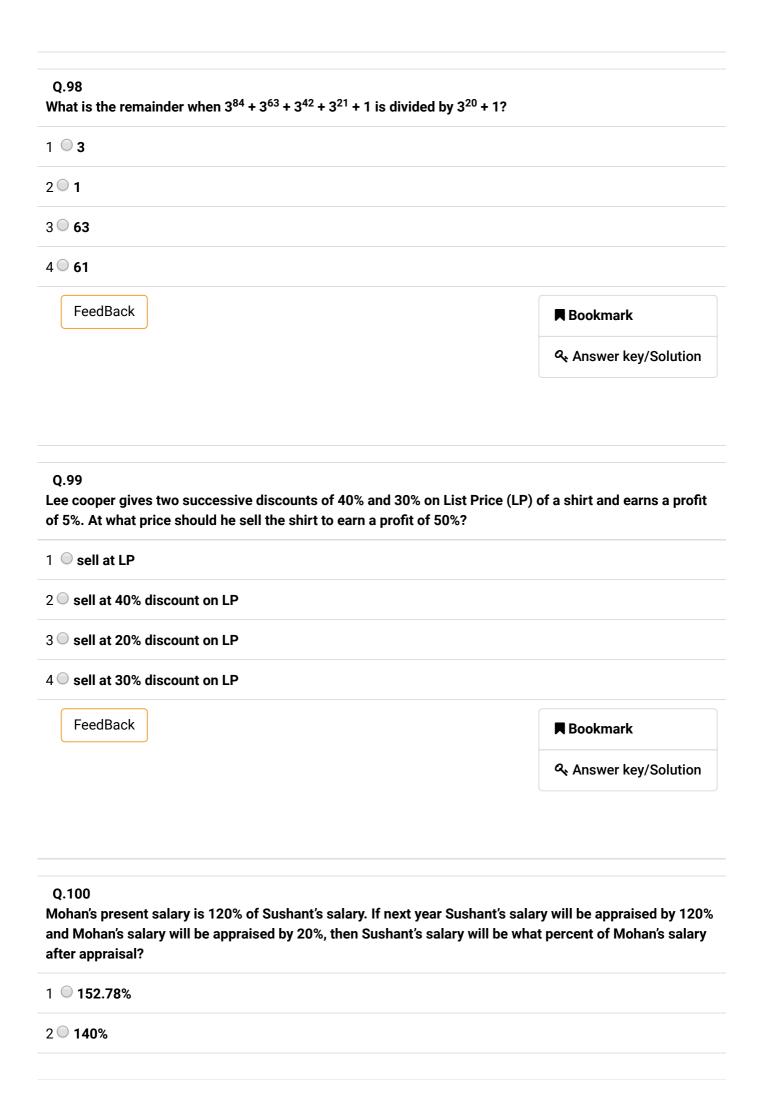
| $a(\sqrt{3}-\pi)$  |   |
|--|---|
| $3 \odot a^2 \left(\sqrt{3} - \pi\right)$  |   |
| $a^{2} \circ a\left(\sqrt{3} - \pi\right)$ $a^{2} \circ a^{2}\left(\sqrt{3} - \pi\right)$ $a^{2} \circ a^{2}\left(\sqrt{3} - \frac{\pi}{2}\right)$ |   |
| •  |   |
| FeedBack   | <b>■</b> Bookmark   |
|  | م Answer key/Solution   |
|  |   |
| Q.94<br>There are two equations, $x^2 + bx + c = 0$ and $x^2$<br>have real roots, then what can be said about th                                   | + cx + b = 0, where b $\neq$ 0 and c $\neq$ 0. If both the equations be value of 'c'?   |
| 1 ○ Minimum possible value of 'c' is 2.  |   |
| 2 ○ There is only one value of 'c' at which it is  | equal to 'b'.   |
| 3 ○ 'c' can only be an integer.  |   |
| 4 ○ None of these  |   |
| FeedBack   | <b>■</b> Bookmark   |
|  | م Answer key/Solution   |
|  |   |
| 50 km/hr for the first 6 hours and completes th  | ng a distance of 600 km, by his car. He travels at a speed of<br>ne remaining journey at a speed of 100 km/ hr. If he returns<br>O km/hr, then time taken by him during the return journey is<br>rom Mumbai to Goa? |
| 1 O 1 hr more  |   |
| 2 <b>1.5</b> hr more   |   |
| 3 ○ 1.5 hr less  |   |



### Q.97

Mihir has decided to launch a monthly music magazine titled as "The BIG M". To reduce the costs, he has loaned a printing press for Rs. 5000. The printing ink and the labour, cost him Rs. 14 per magazine. The article writers and distributors add another Rs. 10000 to his costs. If he prints and sells 5000 magazines at Rs. 10 per magazine, and wants to make a total profit of 20%, then what amount (in Rs.) should he earn from advertisements?





| 3 <b>247</b> % |  |  |  |
|----------------|--|--|--|
| 4 0 366.08%    |  |  |  |

FeedBack

**■** Bookmark

♠ Answer key/Solution