Question of the Day

Book 5

Test Funda.com
complete mba test prep

TABLE OF CONTENTS

SOLUTIONS

PREFACE

For the past couple of years, CAT and other MBA entrance exams have shown a trend towards questions testing a student's ability to apply Mathematical Principles and Analytical Reasoning to solve problems. The unpredictable nature of CAT has ensured that most students are never fully prepared to ace the exam. This is because students limit their preparation to just the learning and practice of core concepts of Mathematics, Verbal Ability and Data Interpretation & Logical Reasoning.

This book is a compilation of the questions with a difficulty level typically on par with CAT. Every single question is original and unique, created by our dedicated team of subject matter experts. The questions are designed to give our readers greater exposure to the types of questions that appear in CAT. The detailed solutions in this book may also provide alternate strategies and shortcuts to solve problems. This book will give students that extra edge and confidence needed to be ready for any surprise that CAT might throw their way.

This book is the 5^{th} in a series of books on the 'Question of the Day' featured on the TestFunda site. We are sure that our readers will benefit greatly from these books.

Question of the Day #01: (03-Jan-09)

A water tank is in the shape of an inverted right circular cone. The tank is standing on horizontal ground on its vertex. The axis of the conical take is perpendicular to the horizontal surface of ground. The height of the tank is 3 m. The tank is completely filled with water, and the volume of the water is 27 L. There are three outlet taps, one at the bottom, second at a height of 1 m, and the third at a height of 2 m. The rate of outflow of each of the three taps is 1 L/min. If all the three taps are opened simultaneously at 12 noon, at what approximate time will the tank get completely empty?

OPTIONS

1) 12:30 pm
2) 12:12 pm
3) 12:11 pm
4) 12:31 pm
5) 1:12 pm

Question of the Day #02: (04-Jan-09)

Select the odd man out from the given alternatives.

OPTIONS

1) Drop off
2) Check out
3) Kick off
4) Kick in
5) Cash in

Question of the Day #03: (05-Jan-09)

What is the approximate probability that two integers x and y chosen at random from 0 to 100 are such that $x^2 - 15x + 56 > 0$ and $|x - y| > 60$?

OPTIONS

1) 0.15
2) 0.20
3) 0.23
4) 0.25
5) 0.29

Question of the Day #04: (06-Jan-09)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Research on animals is performed to gain more knowledge about diseases and how to cure them, and to evaluate drugs for toxicity before testing them on humans. In fact, animal studies have played a vital role in almost every major medical advance.Gaining useful knowledge from animal research requires robust experimental findings: different scientists should be able to reproduce them in different locations. _____

OPTIONS

1) This requires a thorough understanding of each animal species and its biology.
2) However, evidence is gradually accumulating that the majority of research animals are mentally stressed by their living conditions.
3) Between 50 and 100 million animals, from flies to monkeys, are euthanized for research each year worldwide.
4) Many scientists, however, are unaware that their animal facilities can affect research outcomes and compromise their data.
5) However, rigorous standardization of the environment increases the risk of obtaining results that, being specific to a narrow set of conditions, cannot be compared with other researchers' results.

Question of the Day #05: (07-Jan-09)

A question is followed by two statements, A and B. Answer the question using the following instructions:
Mark (1) if the question can be answered by using the statement A alone but not by using the statement B alone.
Mark (2) if the question can be answered by using the statement B alone but not by using the statement A alone.
Mark (3) if the question can be answered by using either of the statements alone.
Mark (4) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (5) if the question cannot be answered on the basis of the two statements.

What are the roots of the cubic equation $x^3 - 3x^2 + cx + d = 0$, where c and d are non zero real numbers?
One root of the equation is 4i (where $i^2 = -1$).
Two roots of the equation are equal but opposite in sign

OPTIONS

1) 1
2) 2
3) 3
4) 4
5) 5

Question of the Day #06 (08-Jan-09)

Select the option as an answer which has an incorrect usage of the word REACH.

OPTIONS

1) He left early so that he would reach the airport on time.
2) The small child had to reach up to pluck the fruit from the tree.
3) In order to reach my home you should take a left turn at the crossroads.
4) Always aim high, try to reach for the stars.
5) All the options have correct usage.

Question of the Day #07: (09-Jan-09)

In India, 10 digit mobile numbers start with 90, 91, 92, 93, 94, 96, 97, 98 or 99. How many distinct even mobile numbers with exactly one zero can be made in India?

OPTIONS

1) 224×9^7
2) 296×9^6
3) 44×9^7
4) 332×9^6
5) None of these

Question of the Day #08: (10-Jan-09)

From the following words, identify which word will make a similar analogous relationship as the first pair.

Churlish: Affable :: Dilettante: _____

OPTIONS

1) Rookie
2) Dabbler
3) Neophyte
4) Amateur
5) Savant

Question of the Day #09: (11-Jan-09)

Rajat purchased few pencils, few erasers and few sharpeners from a shop where price of a pencil and an eraser is Rs. 3 and 20 paisa respectively. Number of sharpeners purchased by Rajat is 7 more than the number of erasers. Which of the following is always true?

OPTIONS

1) If the total expense of Rajat is Rs. 20, he can purchase a maximum of 70 erasers.
2) Last digit of number of sharpeners purchased by Rajat is 7 or 2.
3) Sum of number of pencils, erasers and sharpeners is a prime number.
4) Both options (1) and (2) are true.
5) None of the options is always true.

Question of the Day #10: (12-Jan-09)

Fill in the blank with the most appropriate word/set of words from among the given options.

As far as the ordinary man is concerned, his religious _____ arises mainly due to his_____.

OPTIONS

1) fanaticism, belief
2) tolerance, background
3) intolerance, ignorance
4) inclination, education
5) prejudice, stupidity

Question of the Day #11: (13-Jan-09)

A survey is conducted among 500 families living in Green park residency to measure their wealth. The factors identified for this survey are possession of car, possession of bike, club membership and gym membership. The findings of the survey are as follows:

300 families have both car and bike and have both club and gym membership.
Number of families having both car and bike but do not have any of the club or gym membership is 3.
Number of families having exactly three out of these four factors is zero.
There is no family having membership of club or gym or both but do not have car or bike or both.
Number of families having exactly two out of these four factors is 188.
Which of the following is true?

OPTIONS

1) Number of families do not have any of the four factors is 5.
2) If number of families having exactly one out of these four factors is 7, then number of families having "only car" is 5.
3) Maximum number of families that can have exactly one out of these four factors is 12.
4) Both options (1) and (2) are true
5) Both options (2) and (3) are true

Question of the Day #12: (14-Jan-09)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Technocrats can of course reliably make an electricity plant work better. The goal is simple: to produce electricity at as low a price as possible. This is mostly a matter of engineering, not politics. Economic policies are usually not technocratic in this sense. They involve tradeoffs: some may lead to higher inflation but lower unemployment; some help investors, others workers. Economists call policies where no one can be made better off without making someone else worse off Pareto efficient. _____

OPTIONS

1) In reality, few policies are Pareto efficient.
2) If no one was made worse off by choosing one policy, the policy would indeed be purely "technical."
3) Economic policies cannot be left to technocrats.
4) Banking "reform," is an example: it soon required government bail-outs, leaving a few people much richer, but the country much poorer.
5) Sometimes there are policies that can promote both growth and equality, and the job of good economists is to search for them.

Question of the Day #13: (15-Jan-09)

10 students are going to perform 10 different items in school's annual program. What is the number of ways in which these 10 items can be arranged, if Amar will perform before Bindu, Bindu will perform before Chetan, and Chetan will perform before David?

OPTIONS

1) 5040
2) 3628800
3) 604800
4) 120960
5) None of these

Question of the Day #14: (16-Jan-09)

The question below consists of a paragraph in which the first and last statements are identified as S_1 and S_2 respectively. Choose the option that has the most logical order of the intermediate sentences.

S_1 The force of this analogy is in no degree weakened by the fact
S_2 By which it has gradually gone astray from rectitude.

But the moral feelings become vitiated by a process of the mind itself
That there is, in many cases, an apparent difference between that part of our mental constitution on which is founded our conviction of first truths
For the former continues the same in every mind which is neither obscured by idiocy nor distorted by insanity
And that principle from which is derived our impression of moral truth

OPTIONS

1) DCBA
2) ABCD
3) BCDA
4) BDCA
5) BDAC

Question of the Day #15: (17-Jan-09)

5 boys and 5 girls sit in a row. Which of the following is true?

The probability that all the boys do not sit together is 41/42
The probability that boys and girls sit alternate to each other is (5! × 4!)/9!
The probability that one of the boys Aman sits with one of the girls Tanushree is 1/5
The probability that all the boys sit together and all the girls sit together is 2/10!

OPTIONS

1) A and B
2) A, B and C
3) B, C and D
4) C and D
5) D

Question of the Day #16: (18-Jan-09)

The question below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

(i) The students appeared completely uninterested (A) / disinterested (B) in the course.
(ii) I found the gathering at his birthday party quite amiable (A) / amicable (B).
(iii) The student found her friend's comments incipient (A) / insipid (B)- and ignored them.
(iv) The invalid had a vehicle specially (A) / especially (B) made for him.
(v) The speaker appeared well prepared for his extemporaneous (A) / impromptu (B) speech.

OPTIONS

1) BABAB
2) ABAAB
3) ABBAB
4) AABBA
5) BBBBA

Question of the Day #17: (19-Jan-09)

5 boys and 5 girls sit in a row. Which of the following is true?

If five persons out of these 10 are to be selected at random, the probability that the first is a boy, second is a girl, third is a boy, fourth is a girl and fifth is a boy, is 5/126.
A mixed doubles tennis match is to be organized between these 10 people. The probability that one of the boys Aman and one of the girls Tanushree will be together in one team is 1/25.

OPTIONS

1) A
2) B
3) Both A and B
4) Neither A nor B

Question of the Day #18: (20-Jan-09)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Let me first say bravo for the debt relief provided at last year's G-7 meeting. It has paid off handsomely. More than 20 countries received debt relief. It will make a difference in the lives of millions. In case of debt and debt-relief, many examples exist where lender and borrower are equally to blame: who, for example, should bear the losses from a water project halted when it was discovered to affect a rare toad? Should the poor borrowing country assume these bills, or should the lender who failed to conduct an environment impact statement beforehand?

_____

OPTIONS

1) Should a country get relief only if its income keeps falling?
2) Surely, the lender will have to bear some blame for the borrower's predicament.
3) These are the problems that will determine the future of the global economy.
4) Besides, special economic interests reign supreme, putting aside the careful balancing that marks economic and social policy in successful democracies.
5) Framing a sound debt relief policy won't be easy.

Question of the Day #19: (21-Jan-09)

Pankaj started walking from point A to point B and Prakash started walking from point B to point A, both at 6 a.m. After walking for 2 hours, both met each other and sat down for breakfast, which took 1 hour. Then, both continued their journey. Since they had just had their breakfast, their speeds reduced to half of their initial speeds. After 1 hour, Prakash realised that their keys got exchanged, so he started running towards Pankaj at two and a half times his present speed. If the ratio of Pankaj's and Prakash's initial speeds was 3:2, at what time would Prakash meet Pankaj?

OPTIONS

1) 12:00 p.m.
2) 12:30 p.m.
3) 1:00 p.m.
4) 1:30 p.m.
5) 2:00 p.m.

Question of the Day #20: (22-Jan-09)

Mark the error in the following sentence.

You never know what you'll find(1) among the 'unwanteds' from another person's life;(2) and aside from being(3) a safe haven for treasure hunters,(4) yard sales serves as a way to reduce(5) clutter in one's home.

OPTIONS

1) 1 only
2) 2 only
3) 3 only
4) 4 only
5) 5 only

Question of the Day #21: (23-Jan-09)

A sports club has introduced a new table game for its members. The table is hexagonal, all sides of the hexagon being unequal. Six players can play at a time. Each player stands either at one of the corners of the table or at the centre of one of the sides. Position of a player decides his role in the game. In how many ways can the six players be arranged around the table?

OPTIONS

1) 120
2) 720
3) 44642
4) 665280
5) 46080

Question of the Day #22: (24-Jan-09)

The question below consists of a paragraph in which the first and last sentences are identified as S_1 and S_2 respectively. Choose the option that has the most logical order of the intermediate sentences.

This is properly to be considered as originating in the desire to possess the means of procuring other gratifications.
This may be the case even when the propensity is regulated by the rules of justice; if it breaks through this restraint, it leads to fraud, extortion, deceit, and injustice, and, under another form, to theft or robbery
It is a propensity which may, in a remarkable manner, engross the whole character, acquiring strength by continuance, and it is then generally accompanied by a contracted selfishness, which considers nothing as mean or unworthy that can be made to contribute to the ruling passion.
But, by the influence of habit, the desire is transferred to the thing itself, and it often becomes a kind of mania, in which there is the pure love of gain, without the application of it to any other kind of enjoyment.
S_1: The Desire of Wealth is commonly called Avarice, though avarice is perhaps justly to be regarded as the morbid excess or abuse of the propensity.
S_2: It is therefore always in danger of being opposed to the exercise of the benevolent affections, leading a man to live for himself, and to study only the means calculated to promote his own interest.

OPTIONS

1) CBDA
2) BDAC
3) ACBD
4) BCDA
5) ADCB

Question of the Day #23: (25-Jan-09)

A school teacher played a game, 'Geo-basics' with the students of a mathematics class by asking them to write a statement each on a piece of paper. The statements should be related to basics of geometry lesson that he taught last week to the class.

He gave 3 points to a student, if the statement written by him/her is 'always true', 2 points, if the statement is 'sometimes true' and 1 point if the statement is 'never true'.

What is the sum of the points given by the teacher to a group of five students who wrote the following statements:

(a) It is possible to draw three points that are noncoplanar.

(b) If two ants are walking along different straight lines but in different directions, their paths cannot cross more than once.

(c) If two rays share a common endpoint, then they form a line.

(d) Three coplanar lines may have zero, one, two or three points of intersection.

(e) If two planes intersect, they intersect in a straight line.

OPTIONS

1) 11
2) 13
3) 15
4) Cannot be determined
5) None of these.

Question of the Day #24: (26-Jan-09)

The statement has a part missing. Choose the best option from the options given below the statement to make up the missing part.

The shoes, the hair, the clothes- every last detail of her dress, in fact- were utterly _____.

OPTIONS

1) beau monde
2) dolce vita
3) hoi polloi
4) au courant
5) `a la carte

Question of the Day #25: (27-Jan-09)

A farmer leaves his home at 8 a.m. and heads towards the village temple. His target is to reach the temple at 12 noon. His speed decreases by 20% (of the original speed at the beginning of his journey) for every hour travelled by him and then remains constant for the next 1 hour. At the end of three hours, he has travelled only 70% of the distance. By what percent should he increase his speed for the last one hour (as compared to his third hour speed), so that he reaches the village temple in time?

OPTIONS

1) 49.33
2) 49.34
3) 71.41
4) 71.42
5) 71.44

Question of the Day #26: (28-Jan-09)

Mark the error in the following sentence.

Illnesses of the respiratory tract such as bronchitis(1) was still more frequent(2) among travellers to China,(3) and there are several other potential risks(4) documented in a special Beijing section(5) of the CDC Web site.

OPTIONS

1) 1 only
2) 2 only
3) 3 only
4) 4 only
5) 5 only

Question of the Day #27: (29-Jan-09)

In a class of fifty five students each one has either opted for Computer or Hindi as a subject and was either interested in debate or quiz. The number of students who have opted for Computer and are interested in debate is two-third of the number of students who have opted for Computer and are interested in quiz. Similarly the students interested in Hindi are twice the number of the students interested in Computer and quiz. Find the total number of students who have opted for Hindi.

OPTIONS

1) 30
2) 15
3) 25
4) 20
5) Cannot be determined

Question of the Day #28: (30-Jan-09)

From among the given statements, select the ones which are grammatically inconsistent.

Summer season is actually my least favourite.
At least it has become so ever since I crossed that border from childhood.
But here it is, back again, always sooner than I'm ready for it.
Yes, it's a hot time, summer in the city, so my thoughts naturally turn to hot tomes.
May be I should cool down with books like Edna Ferber's old classic The Ice Palace.

OPTIONS

1) C and D only.
2) A and E only.
3) B and D only.
4) A and B only.
5) None of the above. (All are correct.)

Question of the Day #29: (31-Jan-09)

Points D, E and F are the midpoints of the sides BC, CA and AB of a triangle ABC with centroid at point G. Angle AGB is 90°, side AC is 8 cm and side BC is 6 cm. What is AB^2 (in cm^2)?

OPTIONS

1) 64
2) 100
3) Less than 20
4) Cannot be determined
5) None of these

Question of the Day #30: (01-Feb-09)

A word is highlighted in the sentence given below. Choose the option whose meaning is closest in meaning to the highlighted word.

His writings, which began as a schoolboy's jottings for the amusement of classmates, continued into adulthood, although he describes his youthful work as the musings of a dilettante.

OPTIONS

1) An admirer or lover of the fine arts.
2) One who regards an art or branch of knowledge with wonder, pleasure, or approval.
3) One who follows an art sporadically, superficially, or for amusement only.
4) One who has a high opinion about a branch of art or study.
5) A person new to a field or activity.

Question of the Day #31: (02-Feb-09)

N is the number of possible ordered pairs for two positive integers a and b such that LCM of a and b is 24. M = 3(N + 1) and K = 15M. What is the product of the digits of K?

OPTIONS

1) 1
2) 0
3) 180
4) 200
5) None of these

Question of the Day #32: (03-Feb-09)

The question below consists of a paragraph in which the first and last sentences are identified. Choose the option that has the most logical order of the intermediate sentences.

I. The Desire of Power, or Ambition is the love of ruling, or giving the law to a circle whether more or less extensive.

This we see in the conqueror, who braves every danger, difficulty, and privation, for the attainment of power; and in the statesman, who sacrifices for it every personal advantage, perhaps health and peace.
Such is the desire of exercising power over the minds of men; of persuading a multitude, by arguments or eloquence, to deeds of usefulness; of pleading the cause of the oppressed;- a power of influencing the opinions of others, and of guiding them into sound sentiments and virtuous conduct.
The principle, however, assumes another form, which, according to its direction, may aim at a higher object.
When it becomes the governing propensity, the strongest principles of human nature give way before it,- even those of personal comfort and safety.

II. This is a species of power, the most gratifying by far to an exalted and virtuous mind, and one calculated to carry benefit to others wherever it is exerted.

OPTIONS

1) DACB
2) BDAC
3) BADC
4) DCAB
5) CABD

Question of the Day #33: (04-Feb-08)

Chang Zu, Pang Zu and Mang Zu are playing a game called ''Thrice Dice''. In this game, each of them rolls three dice at a time. If the sum of the numbers appearing on the three dice is divisible by 4, then that particular person scores a point. What is the number of ways in which a player can score a point in this game?

OPTIONS

1) 12
2) 27
3) 64
4) 512
5) 55

Question of the Day #34: (05-Feb-09)

In the following question, the options are Latin or French phrases commonly used in modern English. Choose the most suitable option in the given blank.

I may have _____around the office, but at home I'm a slave to my family's demands.

OPTIONS

1) bon vivant
2) carte blanche
3) carpe diem
4) mot juste
5) force majeure

Question of the Day #35: (06-Feb-09)

Points D, E and F are the midpoints of the sides BC, CA and AB respectively of an isosceles triangle ABC with centroid at point G. Angle BGC is 90° and BC (non equal side of the triangle) is 3 cm. What is the area of triangle ABC (in cm^2)?

OPTIONS

1) $\frac{18}{2}$
2) $\frac{9}{4}$
3) 27
4) $\frac{27}{2}$
5) None of these

Question of the Day #36: (07-Feb-08)

Each of the statements below use the word FATUOUS. Select the statement as the option in which the word FATUOUS is used incorrectly in the given context.

OPTIONS

1) His fatuous behavior was uncalled for.
2) He made a fatuous mistake in his paper.
3) He made a fatuous decision of withdrawing from the poker table when he had made a huge profit.
4) A lot of people crumble under pressure and make fatuous mistakes.
5) He could even pull off a fatuous joke because of the way he delivered the punchline.

Question of the Day #37: (08-Feb-09)

The horizontal distance x and vertical distance y in feet travelled by a firework can be calculated by the functions $x(t) = v(\cos \theta)t$ and $y(t) = -16t^2 + v(\sin \theta)t$. In these functions, v is the initial velocity of the firework, θ is the angle at which the firework is launched, and t is the time in seconds. A firework is launched with an initial velocity of 166 ft/s at an angle of 60°. To achieve the greatest effect, the firework should explode when it reaches its maximum height. Approximately how long after the launch should the firework explode?

OPTIONS

1) 2 s
2) 12 s
3) 13 s
4) 15 s
5) 4.5 s

Question of the Day #38: (09-Feb-09)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Global meat consumption is predicted to double by 2020. Yet in Europe and North America, there is growing concern about the ethics of the way meat and eggs are produced. The consumption of veal has fallen sharply since it became widely known that to produce so-called "white"- actually pale pink- veal, newborn calves are separated from their mothers, deliberately made anemic, denied roughage, and kept in stalls so narrow that they cannot walk or turn around. _____

OPTIONS

1) Concern about how we treat farm animals is far from being limited to the small percentage of people who are vegetarians or even vegans- eating no animal products at all.
2) A common view is that we are justified in eating meat, only as long as the animals have a decent life before they are killed.
3) Some collapse and, unable to reach food or water, soon die, their fate irrelevant to the economics of the enterprise as a whole.
4) Defenders of these production methods argue that they are a regrettable but necessary response to a growing population's demand for food.
5) As consumers, we have the power- and the moral obligation- to refuse to support farming methods that are cruel to animals and bad for us.

Question of the Day #39: (10-Feb-09)

There is a 320 km race between Ram and Shyam in a river stream. They are moving in either downstream or upstream direction (not necessarily in the same direction). Speed of Ram is twice that of Shyam and maximum head start he can give Shyam is 70 hours and maximum head start Shyam can give Ram is 4 hours. What is Ram's speed?

OPTIONS

1) 12 km/hr
2) 24 km/hr
3) 36 km/hr
4) 30 km/hr
5) 35 km/hr

Question of the Day #40: (11-Feb-09)

The question below consists of a set of labelled paragraphs which need to be sequenced. Choose the most logical order of paragraphs from among the options.
Which leaves what philosophers have thought about death generally. Scattered through "The Book of Dead Philosophers" are sage remarks or good epigrams on death from, among others, Augustine, Montaigne and Hobbes. There are passing insights on death and friendship. But Mr Critchley's snippets are too short or digressive for sustained reflection and argument.
Making a success out of such material requires style and wit. Simon Critchley's "The Book of Dead Philosophers" shows leaden playfulness. His tone can be portentous or giggly, as if he is unsure who he is writing for or why. The reader will "die laughing", he says. But most of the deaths he describes on his padded-out list of 190 philosophers are banal, and virtually none is funny. The real trouble is that Mr Critchley, a professor at the New School of Social Research in New York, cannot decide whether he is writing about philosophers' own deaths, exemplary deaths or philosophers' thoughts on death in general.
In nimbler hands the first topic is worth a brisk jeu d'esprit. Lord Quinton's entry on "Deaths of Philosophers" in the "Oxford Companion to Philosophy"- from which the first paragraph of this review was plundered- is a model of artful compression. In 31 erudite lines it satisfies the appetite nicely. The second topic- admirable or instructive death- is a non-starter if you limit yourself to philosophers, as Mr Critchley must quickly have realised. The pool of philosophers who have died in exemplary ways is too small.

OPTIONS

1) BAC
2) CAB
3) BCA
4) ACB
5) CBA

Question of the Day #41: (12-Feb-09)

A ladder is propped against a vertical wall. The distance from either of the ends of the ladder to the intersection of the ground and wall is equal to 5 m. Now, the ladder slips against the wall to come to a new position. If the top end slipped down by 1 m, by what approximate distance did the bottom end slip?

OPTIONS

1) 0.6 m
2) 0.8 m
3) 1 m
4) 1.2 m
5) 1.4 m

Question of the Day #42: (13-Feb-09)

Fill in the blanks in the passage with the most appropriate set of words from the options for each blank.

_____1_____ was not lacking when it came to applying apt names to some of the simplest designs. To have called rows of small triangles running diagonally across as "Wild Goose Chase," the maker must have known something of the ____2____ of wild geese, for as these ____3_____ from North to South and back again following the summer's warmth, they fly one behind the other in long V-shaped lines. The _____4_____ of these lines, swiftly moving across the sky, to her neat rows of triangles supplied the maker of a quilt with her _____5_____.

OPTIONS

1) Wisdom, zoology, move, commonality, inspiration
2) Imagination, habits, migrate, commonality, thought
3) Imagination, habits, migrate, resemblance, inspiration
4) Thought, history, go, resemblance, inspiration
5) Imagination, history, go, commonality, thought

Question of the Day #43: (14-Feb-09)

ABC is a triangle right angled at A and p is the length of the perpendicular from A to BC. If AC = b and AB = c, then which of the following is true?

OPTIONS

1) $\frac{1}{p^4} = \frac{1}{b^4} + \frac{1}{c^4}$
2) $\frac{1}{p^2} = \frac{1}{b^2} + \frac{1}{c^2}$
3) $\sqrt{p^3} = \sqrt{b^3} + \sqrt{c^3}$
4) $\frac{1}{p} = \frac{1}{b} + \frac{1}{c}$
5) None of the above

Question of the Day #44: (15-Feb-09)

The question below consists of a paragraph in which the first and last sentences are identified. Choose the option that has the most logical order of the intermediate sentences.

I. The reporter of these monologues would apologize for the frequent reappearances of Mr. Dooley, if he felt the old gentleman would appreciate an apology in his behalf.

To these utterances have been added a number of obiter dicta by the philosopher, which, perhaps, will be found to have the reminiscent flavor that appertains to the observations of all learned judges when they are off the bench.
Most of the papers in the present collection of the sayings of this great and learned man have appeared in the press of America and England.
But Mr. Dooley has none of the modesty that has been described as "an invention for protection against envy," because unlike that one of his distinguished predecessors who discovered this theory to excuse his own imperfect but boastful egotism, he recognizes no such human failing as envy
This will account for the fact that they deal with subjects that have pressed hard upon the minds of newspaper readers, statesmen, and tax-payers during the year.

II. In some cases the sketches have been remodeled and care has been taken to correct typographical blunders, except where they seemed to improve the text and in this connection the writer must offer his profound gratitude to the industrious typographer, who often makes two jokes grow where only one grew before, and has added generously to the distress of amateur elocutionists.

OPTIONS

1) ADBC
2) CBDA
3) ABCD
4) DABC
5) CDBA

Question of the Day #45: (16-Feb-09)

The square base of the great Pyramid in Egypt has a side length of 230 m, and the sides of the Pyramid meet the base at an angle which measures approximately 60°. What is the approximate sum of the height and slant height of the Pyramid?

OPTIONS

1) 875 m
2) 458 m
3) 587 m
4) 633 m
5) 256 m

Question of the Day #46: (17-Feb-09)

In the following question the options are Latin or French phrases commonly used in modern English. Choose the best option to fit the blank.

She vowed that when she had the means, she would return his favors _____.

OPTIONS

1) coup de grace
2) prima facie
3) quid pro quo
4) veni, vidi, vici
5) haute couture

Question of the Day #47: (18-Feb-09)

Named after its designer, Gustave Eiffel, the Eiffel Tower is the tallest building in Paris. Including the 24 m antenna, the structure is 325 m high. When the tower was completed in 1889, a man whose eye level was 1.5 m above the ground measured the angle of elevation to the top of the tower to be 30°. What is the approximate distance of the man from the tower base?

OPTIONS

1) 323.5/√3 m
2) 325/√3 m
3) 460 m
4) 500 m
5) 560 m

Question of the Day #48: (19-Feb-09)

Mark the error(s) in the following sentences

A. Be generous with the scarce resource.
B. Figure out what the real fight is over.
C. I once saw my children fight over a dirty dishrag - proof that something else was stake.
D. If it's love and attention, make it clear there is enough to go.
E. At work, it's often public praise and recognition of each persons unique ability to contribute to the organization that's needed.

OPTIONS

1) A, C and D only.
2) B, C, and D only.
3) B, C and E only.
4) C, D and E only.
5) A, C and E only.

Question of the Day #49: (20-Feb-09)

The population of a town A increases by x% every year for three years. The population of another town B, which was initially equal to that of A, increases by 39.9% for one year. Then the number of people added to the population each year for the next two years is the same as in the first year. The population of towns A and B is again equal at the end of three years. What is the value of x?

OPTIONS

1) 25
2) 30
3) 32
4) 35
5) None of these

Question of the Day #50: (21-Feb-09)

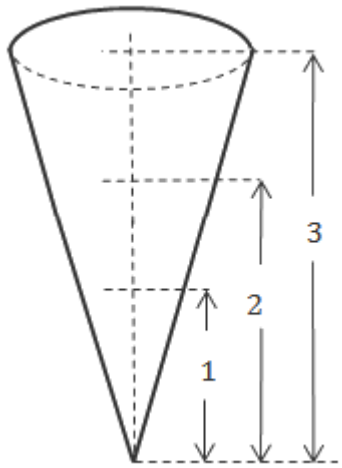
A. Just as the Origin of Species reshaped social thinking, just as Einstein's theory of relativity reshaped art, so the revolution in neuroscience is having an effect on how people see the world.
B. Not only is that a very unfair statement, but also quite untrue.
C. The militant materialism of some modern scientists believes that human beings are hard-wired to do things, with religion being an accident.
D. It is because of the especially hot summer and oil prices rose dramatically, that has created such difficult times.
E. Organizations are of two kinds: those which aim at getting something done, and those which aim at preventing something from being done.

OPTIONS

1) B and D
2) D only
3) A, B and C
4) D and E

SOLUTIONS

Solution #01: (03-Jan-09)



Refer the diagram,

The ratio of volumes of cones up to height 1 m, 2 m and 3 m = $1^3 : 2^3 : 3^3 = 1 : 8 : 27$

∴ The ratio of volumes of water in the tank above 2 m, between 2 m and 1 m, and below 1 m = (27 − 8) : (8 − 1) : 1 = 19 : 7 : 1

Since the total volume of water in the tank is 27 L, therefore the volume of the water above 2 m, between 2 m and 1 m, and below 1 m is 19 L, 7 L and 1 L respectively.

When the water level is above 2 m height, all the three taps contribute to empty the tank, but when water level is between 2 m and 1 m, only 2 taps contribute, and when the water level is below 1 m, only 1 tap contribute to empty the tank.

∴ Total time required to empty the tank = 19/3 + 7/2 + 1/1 = 65/6 ≈ 11 min

∴ The tank will be empty after approximately 11 min past 12, i.e. at 12:11 pm.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #02: (04-Jan-09)

'To drop off' means 'to fall asleep', 'to decrease; decline', 'to unload'.

All the others phrases are used to mean (often in informal use) 'to die.'

E.g., After his grandparents cashed in, he lived with his friends.

We can substitute any other phrase except 'drop off' to get the same meaning.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #03: (05-Jan-09)

Total number of ways to choose two integers x and y from 101 integers
(0 to 100) = 101 × 101 = 10201

Now, for $x^2 - 15x + 56 > 0$
$(x - 7)(x - 8) > 0$
$\therefore x < 7$ or $x > 8$
Also, for $|x - y| > 60$
$(x - y) > 60$ or $(x - y) < -60$

Case 1: $(x - y) > 60$
For x = 61, y = 0
For x = 62, y = 0, 1
For x = 63, y = 0, 1, 2
.
.
.
For x = 100, y = 0, 1, 2, …, 39

Case 2: $(x - y) < -60$
For y = 61, x = 0
For y = 62, x = 0, 1
For y = 63, x = 0, 1, 2
For y = 64, x = 0, 1, 2, 3
For y = 65, x = 0, 1, 2, 3, 4
For y = 66, x = 0, 1, 2, 3, 4, 5
For y = 67, x = 0, 1, 2, 3, 4, 5, 6
For y = 68, x = 0, 1, 2, 3, 4, 5, 6 (x cannot be 7)
For y = 69, x = 0, 1, 2, 3, 4, 5, 6 (x cannot be 7 and 8)
For y = 70, x = 0, 1, 2, 3, 4, 5, 6, 9
For y = 71, x = 0, 1, 2, 3, 4, 5, 6, 9, 10
.
.
For y = 100, x = 0 to 6 and 9 to 39

∴ Total number of favourable cases = (1 + 2 + 3 + … + 40) + (1 + 2 + 3 + 4 + 5 + 6 + 7 + 7 + 7 + 8 + … + 38) = 1575

∴ Required probability = 1575/10201 ≈ 0.15

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #04: (06-Jan-09)

The paragraph states about significance of animal research and the requirements for 'robust' data.
If the data is to be robust another requirement is given in option1.
Options 2 and 3 are therefore far removed from the paragraph.
Options 4 and 5 look at some shortcomings, perhaps relevant, but the short paragraph is not written to highlight the shortcomings, but merely to highlight the significance of animal research.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #05: (07-Jan-09)

From statement (A) alone,
As d is real the product of the roots must be real.
∴ The second root of the equation would be complex conjugate of 4i, i.e. −4i.
Also, sum of the roots = −(coefficient of x^2/coefficient of x^3) = 3
∴ (4i) + (−4i) + (third root) = 3
∴ 0 + (third root) = 3
∴ Third root = 3
∴ The three roots of the equation are (4i), (−4i) and 3.
∴ Statement A alone is sufficient to answer the question.

From statement (B) alone,
Let the three roots of the equation be m, −m and n.
The sum of the roots = m + (−m) + n = 3
∴ n = 3
But we cannot find the first two roots from the given data.
∴ Statement B alone is not sufficient to answer the question.

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #06: (08-Jan-09)

In option 2, the usage of the word 'reach' is correct. The sentence has the intended meaning.

In options 1 and 3, the usage of the word 'reach' is correct, as it has the intended meaning of 'arrive at'.

In option 4 the use of the word 'reach' is grammatically correct; the word 'reach' as used in this option has the meaning of 'trying to achieve something'.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #07: (09-Jan-09)

Case1:
Consider numbers starting with 90.
There is one way in which first two digits can be filled as 90.
For the number to be even, last digit can be filled in 4 ways (digits 2, 4, 6 or 8).
The remaining 7 digits can be any of the 9 digits (except 0).
Therefore, total numbers in this case = $1 \times 1 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 4 = 36 \times 9^6$

Case 2:
Consider numbers starting with 91 and ending with 0.
There is one way in which first two digits can be filled as 91.
If the last digit is 0, the remaining 7 digits can be any of the 9 digits (except 0).
Therefore, total numbers in this case = $1 \times 1 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 1 = 9 \times 9^6$

Case 3:
Consider numbers starting with 91 and not ending with 0.
There is one way in which first two digits can be filled as 91.
For the number to be even, last digit can be filled in 4 ways (digits 2, 4, 6 or 8).
If the last digit is not 0, it should be at one of the remaining 7 positions, and the remaining 6 digits can be any of the 9 digits (except 0).
Therefore, total numbers in this case = $1 \times 1 \times 7 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 4 = 28 \times 9^6$
Case 2 and 3 is valid for numbers starting with 92, 93, 94, 96, 97, 98 and 99 also.
$\therefore$ Total required number = $(36 \times 9^6) + 8 \times (9 \times 9^6) + 8 \times (28 \times 9^6) = 332 \times 9^6$

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #08: (10-Jan-09)

The relationship between the words of the original pair is antonymous.
"Churlish" means 'boorish or rude or uncouth'.
"Affable" means 'pleasantly easy to approach and to talk to; friendly; cordial'
Similarly, a "dilettante" is an 'amateur or a dabbler'.
'Neophyte' and 'rookie' also mean 'beginners' or 'amateurs'.
However, 'savant' means a 'scholar' or an 'expert'.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #09: (11-Jan-09)

Let the number of pencils, erasers and sharpeners purchased by Rajat be p, e and s respectively. Let the price of one sharpener be Rs. m.
Considering option (1), we get,

$3p + 0.2e + ms = 20$ …(i)

And, $s = e + 7$ …(ii)

To maximize the number of erasers, price of a sharpener m can be reduced to a negligible value.

$\therefore 3p + 0.2e + 0 = 20$

Now the minimum value of p is 1.
$\therefore$ Maximum value of $e = (20 - 3) \times 5 = 85$
$\therefore$ Option 1 is not true.

Considering option (2), we get,

$3p + 0.2e + ms =$ total price ...(iii)

And, $s = e + 7$

We cannot find last digit of s, because we cannot find e from equation (iii).

$\therefore$ Option 2 is not true.

Similarly,
Option 3 is also not true, because we cannot conclude anything about the sum of p, e and s.

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #10: (12-Jan-09)

After analyzing the sentence, we can see that the second word is a quality of an ordinary man which influences, to a large extent, a religious tendency of his.

Option 1 is not logically correct, as 'fanaticism' is not defined as a consequence of belief, but rather as a consequence of wrong interpretation of belief.

Option 2 does not seem correct either. The stress in this sentence is on a perfectly general 'ordinary man' and so when we imply that his background is responsible for making him tolerant, we miss the entire meaning of the sentence.

There is a clear reference in the sentence to the 'ordinary man', not necessarily the educated one. His 'ignorance' could be the only cause of his 'intolerance'. Option 3 seems like an appropriate option in the context of the sentence.

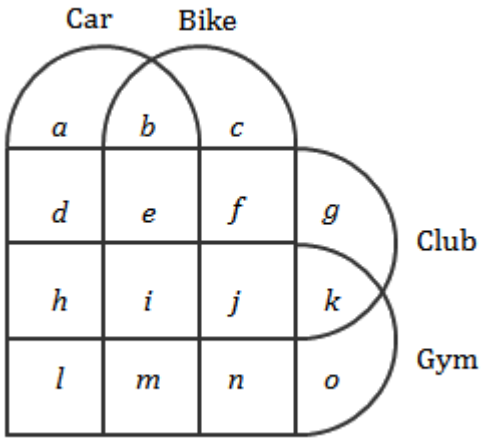
A person's 'education' need not necessarily have anything to do with his religious inclination. Therefore, this sentence does not make logical sense. Eliminate option 4.

Option 5 is not appropriate because it links 'prejudice' to 'stupidity'.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #11: (13-Jan-09)



Refer the Venn diagram,

From statement (A), we get,

i = 300

From statement (B), we get,

b = 3

From statement (C), we get,

e + h + j + m = 0

∴ e = h = j = m = 0

From statement (d), we get,

g + k + o = 0

∴ g = k = o = 0

From statement (E), we get,

b + d + f + k + l + n = 188

∴ 3 + d + f + 0 + l + n = 188

∴ d + f + l + n = 185

Now, consider option (1),

∵ We do not have values of a and c, therefore we cannot calculate the number of families that do not have any of the four factors.

∴ Option 1 is not true.

Consider option (2),

Given, a + c + g + o = 7

∴ a + c + 0 + 0 =7

∴ a + c = 7

But we cannot find the value of a from the above equation.

∴ Option 2 is not true.

Consider option (3),

To maximize (a + c + g + o) i.e. (a + c), take minimum value for the number of families do not have any of the four factors.

∴ 500 = a + b + c + d + e + f + g + h + i + j + k + l + m + n + o

∴ 500 = (a + c) + (b) + (i) + (d + f + l + n) + (e + h + j + m) + (g + k + o)

∴ 500 = (a + c) + 3 + 300 + 185 + 0 + 0

∴ Maximum (a + c) = 500 − (3 + 300 + 185) = 500 − 488 = 12

∴ Option 3 is true.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #12: (14-Jan-09)

Of the given statements, a specific example of a "Pareto efficient" economic policy is the best way to complete the paragraph.

Option 1 is not the answer because it generalizes- Few 'economic' policies would have made it better.

Option 2 is already stated and will merely be a repetition.

Option 3 is true, but that is not the purpose of the paragraph.

Option 5 is rather conducive towards economists, as if they are not doing it already- however, it doesn't help to close the paragraph unless the author wants to educate the economists, which does not seem to be the writer's purpose.

Option 4 gives an example of a "Pareto efficient" policy.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #13: (15-Jan-09)

10 items can be arranged in 10! ways without any condition. These 10! ways also include the mutual permutations of the 4 items performed by Amar, Bindu, Chetan and David. But the order of these 4 items is fix, therefore to nullify the effect of mutual permutations, we have to divide 10! by 4!.

∴ The required number of ways = 10!/4! = 5 × 6 × 7 × 8 × 9 × 10 = 151200

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #14: (16-Jan-09)

Statements D and A appear discontinuous, therefore all the options with the DA link should be eliminated. This eliminates options 3 and 5.

Option 2 can be eliminated as statement A is not consistent with statement S_1.

Option 1 gets disconnected in BA. In fact, D is the only statement that can follow B- "that part" and "that principle" are parallel in nature.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #15: (17-Jan-09)

Consider statement (A),
Total number of way to arrange 5 boys and 5 girls in a row (without any condition) = (5 + 5)! = 10!
Number of ways in which all the boys can sit together = 6! × 5!
[Here, consider 5 boys as one entity to make total 6 entities to be arranged in a row, which gives 6!. Then mutual permutations of these 5 boys give 5!]
∴ Probability that all the boys do not sit together = 1 − probability that all the boys sit together
= 1 − (number of favourable ways/number of total ways)
= 1 − (6! × 5!)/10!
= 41/42
∴ Statement A is true.

Consider statement (B),
The number of ways in which boys and girls can sit alternate = number of ways in which boys sit on odd positions and girls sit on even positions + number of ways in which boys sit on even positions and girls sit on odd positions
= 5! × 5! + 5! × 5!
= 2 × 5! × 5!
∴ Probability that boys and girls sit alternate = number of favourable ways/number of total ways
= (2 × 5! × 5!)/10!
= (4! × 5!)/9!
∴ Statement B is true.

Consider statement (C),
Consider Aman and Tanushree as one entity, to make total 9 entities to be arranged in a row, which can be done in 9! ways, and for the mutual permutations of these two multiply 9! by 2!.
∴ Required probability = (9! × 2!)/10! = 1/5
∴ Statement C is true.

Consider statement (D),
There are only two ways in which all the boys sit together and all the girls sit together. But for mutual permutations of boys and girls we multiply 2 with 5! × 5!.
∴ Required probability = (2 × 5! × 5!)/10!
∴ Statement D is not true.

Hence, option 2.

[Note: Since, there is no option which says all the four statements are true, therefore it is not necessary to check statement D]

Discuss the solution with Testfunda users.

Solution #16: (18-Jan-09)

"Uninterested" means 'not interested'while "Disinterested" means 'unbiased'. Here, "uninterested" would be correct since the likelihood is that the students were not interested in the course.
'Unbiased' would be incorrect, contextually.
"Amiable" means 'friendly'; "Amicable" means a 'desire not to quarrel'. "Amiable" would be the correct word in this context since a gathering can only be described as 'friendly' in this context.
"Incipient" means 'beginning to occur' while "Insipid" means 'tasteless' and is the correct word since comments can only be 'tasteless' not 'beginning to occur'.
"Specially" means 'for a specific reason' while "Especially" means 'particularly, or exceptionally' and is the correct word here.
"Extemporaneous" means 'delivered without any notes'. "Impromptu" means 'without preparation'. "Extemporaneous" is the correct word here since the speaker appeared "well prepared" for the speech and "Impromptu" would contradict this.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #17: (19-Jan-09)

Consider statement (A),
Probability that first is boy = 5/10
Probability that first is boy and second is girl = 5/10 × 5/9
Similarly,
The required probability = 5/10 × 5/9 × 4/8 × 4/7 × 3/6 = 5/126
∴ Statement A is true.

Consider statement (B),
Total number of ways to choose 2 boys and 2 girls for mixed doubles tennis match = ${}^5C_2 \times {}^5C_2 = 10 \times 10 = 100$
These 2 boys and 2 girls can team up in two ways.
∴ Total number of ways in which match can be organized = 100 × 2 = 200
If Aman and Tanushree are there in one team, we have to just select (for the second team) 1 boy from the remaining 4 boys and 1 girl from the remaining 4 girls.
Number of ways to do this = ${}^4C_1 \times {}^4C_1 = 4 \times 4 = 16$
∴ Required probability = 16/200 = 2/25
∴ Statement B is not true.

Hence, option 1.

Discuss the solution with Testfunda users.

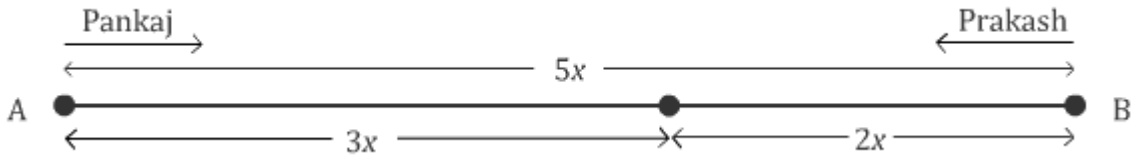
Solution #18: (20-Jan-09)

Options 1, 2, and to a certain extent option 3- which mentions 'global economy' in the context and are relevant, can all be accommodated in option 5 since the paragraph is on "debt relief."
Furthermore, option 5 brings the paragraph to a smooth closure.
Option 4 is not relevant to the paragraph since it is not on "debt relief".

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #19: (21-Jan-09)



The ratio of Pankaj's and Prakash's initial speeds was 3:2, let the total distance between A and B be 5*x*. Therefore, Pankaj covered a distance of 3*x* and Prakash covered 2*x* before they met. Since they travelled for 2 hours, their initial speeds were 1.5*x* and *x* respectively.

After breakfast, their speeds reduced to half, so they were 0.75*x* and 0.5*x* respectively. Both of them travelled for 1 hr in opposite directions.

∴ The distance between them at 10 a.m. = 0.75*x* + 0.5*x* = 1.25*x*

Now, Prakash starts running at 2.5 times his present speed, which means at 1.25*x*.

Pankaj is walking at 0.75*x* in the same direction and is 1.25*x* ahead of him.

$$\therefore \text{The time taken by Prakash to catch up with Pankaj} = \frac{1.25x}{(1.25x - 0.75x)}$$

$$= \frac{1.25}{0.5} = 2.5 \text{ hrs}$$

∴ He would meet Pankaj at 12:30 p.m.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #20: (22-Jan-09)

'You never know' – though rather informal is correct use.

"Aside from" means 'besides'.

"Yard sales" is an event therefore the singular verb *serves* is correct.

Safe haven like 'end result' or 'past history' is redundant, making it the erroneous part. The word "safe" is superfluous.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #21: (23-Jan-09)

Note that each corner on the table and the centre of each side can be distinguished from one another.

∴ There are 12 distinct positions on the table.

∴ This can be treated as a linear arrangement of 6 people in 12 places.

∴ The required number of arrangements = ${}^{12}P_6 = 665280$

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #22: (24-Jan-09)

Statements B and D cannot go together with the word 'but' in statement D. The 'but' in statement D would indicate that a contrasting opinion is being made, which is not the case. Thus, we can eliminate options 1, 2 and 3.
There is a clear AD link with statement A mentioning "desire" for gratification and D expanding on that theme by stating that the "desire" transfers to the thing itself which is "greed". With this knowledge (AD link), we can eliminate all the other options except option 5.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #23: (25-Jan-09)

Lets examine each statement:

(a) It is not possible to draw three points that are noncoplanar.
Any three noncollinear points are contained in a unique plane. If the three points are collinear, they are contained in infinitely many planes. In either case, the three points will be coplanar. Hence the statement is never true. Point given = 1

(b) If two lines intersect, then they intersect in exactly one point. Hence the statement is always true. Points given = 3

(c) If two rays share a common endpoint, then they form an angle or a line (straight angle). Hence the statement is sometimes true. Points given = 2

(d) When three coplanar lines are parallel, then they will not intersect. If all these three lines pass through a common point, then they intersect at one point. If two of these lines are parallel and one line is not parallel to these two lines, then we will get two intersection points. When none of the pair of any two lines out of these three lines are parallel to each other, then they can intersect at three points. Hence the statement is always true. Points given = 3

(e) If two planes intersect, they intersect in a straight line. It is a postulate that is always true. Points given = 3

Sum of the points given = 1 + 3 + 2 + 3 + 3 = 12

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #24: (26-Jan-09)

The meanings of the words are as follows.

1. "Beau monde": 'high society, in the context this may seem to fit - but the phrase refers to the people of high society'. Eg: She would impress even the beau monde.
2. "Dolce vita": 'sweet life; the good life perceived as one of physical pleasure and self-indulgence'.
3. "Hoi polloi": 'the common people'.
4. "Au courant": 'up-to-date'. This option resonates with 'every last detail' in the given statement.
5. "a la carte"- 'with a separate price for each dish offered on the menu'.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #25: (27-Jan-09)

Let d_1, d_2, d_3 and d_4 be the distances travelled and s_1, s_2, s_3 and s_4 be the speeds in 1st, 2nd, 3rd and 4th hours respectively.

At the end of three hours distance travelled by the farmer is $d_1 + d_2 + d_3 = 0.7d$ (where d is the distance between his house and village temple)

Let x be the original speed (in km/hr) of the farmer.

$$\therefore s_1 = x, s_2 = \left(\frac{4x}{5}\right) \text{ and } s_3 = \left(\frac{3x}{5}\right)$$

$$\therefore d_1 + d_2 + d_3 = (x \times 1) + \left(\frac{4x}{5} \times 1\right) + \left(\frac{3x}{5} \times 1\right) = \frac{12x}{5}$$

$$\therefore 0.7d = \frac{12x}{5}$$

$$\therefore d = \frac{24x}{7}$$

$$\text{Now, the remaining distance } d_4 \text{ is } 0.3d \text{ or } \frac{36x}{35}$$

Now, to reach the village temple in time the farmer has to travel the distance of $0.3d$ in one hour.

$$\therefore \text{His speed in the fourth hour must be} = s_4 = \frac{36x}{35}$$

∴ Percentage increase in the speed in the fourth hour (as compared to his speed third hour)

$$= \left[\frac{s_4 - s_3}{s_3}\right] \times 100$$

$$= \left[\frac{\left(\frac{36x}{35} - \frac{3x}{5}\right)}{\left(\frac{3x}{5}\right)}\right] \times 100$$

≈ 71.42%

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #26: (28-Jan-09)

"Illnesses" is the subject of the sentence, therefore the verb in the underlined part 2 has to be plural '*were'* and not the singular 'was'.
All the other parts of the sentence are correct.

Hence, the correct answer option is 2.

Discuss the solution with Testfunda users.

Solution #27: (29-Jan-09)

Let the students who have opted for Computer and are interested in quiz be *x*.

∴The number of students who have opted for Computer and are interested in debate = 2*x*/3

Since each student is either interested in debate or quiz the union of these two sets represents the total number of students who have opted for Computer.

$$\therefore \text{The number of students are interested in Computer} = x + \frac{2x}{3} = \frac{5x}{3}$$

$$\therefore \text{The number of students who have taken Hindi} = 55 - \frac{5x}{3}$$

Now the number of students who have taken Hindi is twice the number of students who have chosen Computer and are interested in quiz.

$$\therefore 55 - \frac{5x}{3} = 2x$$

∴ *x* = 15

∴The number of students who have opted for Hindi = 55 − 5(15/3) = 30

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #28: (30-Jan-09)

Summer season is redundant. The sentence has to be changed to: 'Summer is actually my least favourite season'.

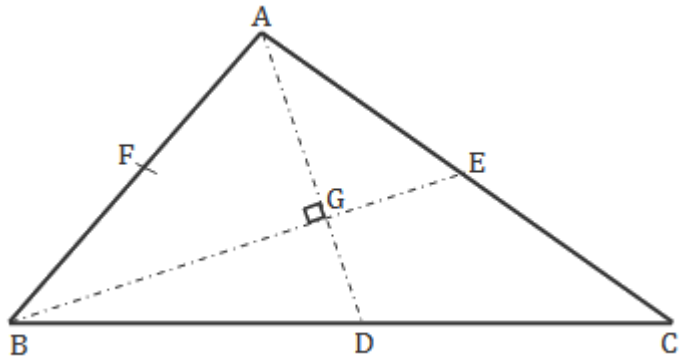
Statements B,C and D are correct. This eliminates options 2, 3, 4 and 5.

'May be' needs to be distinguished form *maybe* (spaced out and without space). Without the space, *maybe* (adverb) means *perhaps*. May be (spaced out, is a verb).

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #29: (31-Jan-09)



Refer the diagram,
$\because \angle AGB = 90°$
$\therefore \angle BGD = \angle AGE = 90°$
Centroid (point G) divides the medians AD and BE in the ratio 2:1.
Let AG = $2x$, DG = x, BG = $2y$ and EG = y

In right triangle BGD,
$DG^2 + BG^2 = BD^2$
$\therefore x^2 + (2y)^2 = 3^2$
$\therefore x^2 + 4y^2 = 9$ …(i)

In right triangle AGE,
$AG^2 + EG^2 = AE^2$
$\therefore (2x)^2 + y^2 = 4^2$
$\therefore 4x^2 + y^2 = 16$ …(ii)

From equation (i) and (ii), we get,
$5x^2 + 5y^2 = 25$
$\therefore 4x^2 + 4y^2 = 20$ …(iii)

In right triangle AGB,
$AB^2 = AG^2 + BG^2$
$\therefore AB^2 = (2x)^2 + (2y)^2$
$\therefore AB^2 = 4x^2 + 4y^2$ …(iv)

From equations (iii) and (iv), we get,
$AB^2 = 20\ cm^2$

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #30: (01-Feb-09)

Most of the options are partially correct but they miss the implications or nuances of the word "dilettante".
A "dilettante" is more than an admirer and observer as mentioned in options 1 and 2. He takes up the subject, albeit in a superficial way.
Options 4 and 5 are also partial. They do not mention that the "dilettante" 'dabbles' in the field of his choice.
Option 5 correctly describes a 'novice'.
Option 3 gives the correct meaning of the word "dilettante".

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #31: (02-Feb-09)

∵ LCM (a, b) = 24

∴ (a, b) = (1, 24); (24, 1); (2, 24); (24, 2); … (8, 3); (3, 8); …

As we can see that for every pair of a and b such as (2, 24) there is an opposite ordered pair (24, 2). But for one pair (24, 24) there is no other distinct opposite pair.

∴ Number of possible ordered pair N would be an odd number.

∴ N + 1 would be even.

∴ M would be even.

∴ K would end at 0.

∴ Product of all the digits of K would be 0.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #32: (03-Feb-09)

Statement C with the word 'however' implies that an opposite idea from the one spoken in the earlier statement will follow.
Statements B and A have opposite ideas which makes C a mandatory insertion between them.
Therefore looking for the pattern ACB or BCA, only option 1 satisfies this condition.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #33: (04-Feb-09)

When three dice are thrown, a minimum sum of 3(1 + 1 + 1) and a maximum sum of 18(6 + 6 + 6) is possible, out of which there are 4 multiples of 4(4, 8, 12 and 16).

Case 1: Sum on the dice is 4

$(1 + 1 + 2 = 4)$, this will appear in 3 ways $\left[\frac{3!}{2!} = 3\right]$

The three ways are: (1, 1, 2); (1, 2, 1) and (2, 1, 1).

Case 2: Sum on the dice is 8
(1 + 1 + 6), this will appear in 3 ways
(1 + 2 + 5), this will appear in 6 ways [3! = 6]

Similarly,
(1 + 3 + 4) in 6 ways, (2 + 2 + 4) in 3 ways and (2 + 3 + 3) in 3 ways.

Case 3: Sum on the dice is 12
(1 + 5 + 6) in 6 ways, (2 + 4 + 6) in 6 ways, (2 + 5 + 5) in 3 ways, (3 + 3 + 6) in 3 ways, (3 + 4 + 5) in 6 ways and (4 + 4 + 4) in 1 way.

Case 4: Sum on the dice is 16
(4 + 6 + 6) in 3 ways and (5 + 5 + 6) in 3 ways.
∴ The total number of ways that anyone scores a point = (3) + (3 + 6 + 6 + 3 + 3) + (6 + 6 + 3 + 3 + 6 + 1) + (3 + 3) = 55 ways

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #34: (05-Feb-09)

When three dice are thrown, a minimum sum of 3(1 + 1 + 1) and a maximum sum of 18(6 + 6 + 6) is possible, out of which there are 4 multiples of 4(4, 8, 12 and 16).

Case 1: Sum on the dice is 4

$$(1+1+2=4), \text{this will appear in 3 ways } \left[\frac{3!}{2!}=3\right]$$

The three ways are: (1, 1, 2); (1, 2, 1) and (2, 1, 1).

Case 2: Sum on the dice is 8

(1 + 1 + 6), this will appear in 3 ways

(1 + 2 + 5), this will appear in 6 ways [3! = 6]

Similarly,

(1 + 3 + 4) in 6 ways, (2 + 2 + 4) in 3 ways and (2 + 3 + 3) in 3 ways.

Case 3: Sum on the dice is 12

(1 + 5 + 6) in 6 ways, (2 + 4 + 6) in 6 ways, (2 + 5 + 5) in 3 ways, (3 + 3 + 6) in 3 ways, (3 + 4 + 5) in 6 ways and (4 + 4 + 4) in 1 way.

Case 4: Sum on the dice is 16

(4 + 6 + 6) in 3 ways and (5 + 5 + 6) in 3 ways.

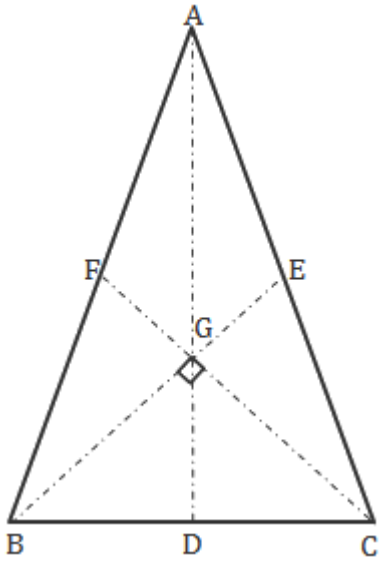
∴ The total number of ways that anyone scores a point = (3) + (3 + 6 + 6 + 3 + 3) + (6 + 6 + 3 + 3 + 6 + 1) + (3 + 3) = 55 ways

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #35: (06-Feb-09)

Refer the diagram,



In right triangle BGC,

$\because$ BC = 3 cm

$$\therefore BG = CG = \frac{3}{\sqrt{2}} \text{ cm}$$

$$\therefore EG = FG = \frac{\left(\frac{3}{\sqrt{2}}\right)}{2} = \frac{3}{2\sqrt{2}} \text{ cm}$$

Now, in right triangle BGF,

$$BF = \sqrt{BG^2 + FG^2}$$

$$\therefore BF = \sqrt{\frac{9}{2} + \frac{9}{8}} = \frac{3}{2}\sqrt{\frac{5}{2}} \text{ cm}$$

$$\therefore AB = 2BF = 3\sqrt{\frac{5}{2}} \text{ cm}$$

Now, in right triangle ADB,

$$AD = \sqrt{AB^2 - BD^2}$$

$$\therefore AD = \sqrt{9 \times \frac{5}{2} - \frac{9}{4}} = \frac{9}{2} \text{ cm}$$

$$\text{Now, area of triangle ABC} = \frac{1}{2} \times \text{AD} \times \text{BC}$$

$$\therefore \text{Area of triangle ABC} = \frac{1}{2} \times \frac{9}{2} \times 3 = \frac{27}{4} \text{ cm}^2$$

Hence, option 5.

Alternatively,

Area of triangle ABC = 3 × Area of triangle BGC

$$= 3 \times \frac{1}{2} \times \text{BG} \times \text{CG}$$

$$= 3 \times \frac{1}{2} \times \frac{3}{\sqrt{2}} \times \frac{3}{\sqrt{2}} = \frac{27}{4} \text{ cm}^2$$

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #36: (07-Feb-09)

Fatuous means “idiotic, silly, stupid, foolish”. Sensible is its antonym.
The base word can be substituted by its meanings in options 1, 2, 4 and 5.
In option 3, however, the base word cannot be substituted by its meaning because of the context in which it is used. The word can be substituted by its antonym. The sentence is contextually correct when the antonym ‘sensible’ is used.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #37: (08-Feb-09)

At maximum height, first derivative of the vertical distance function is equal to zero.

$$\therefore \frac{d}{dt}[y(t)] = 0$$

$\therefore -32t + v\sin\theta = 0$

$\therefore -32t + (166 \times \sin 60°) = 0$

$$\therefore -32t + \left[166 \times \left(\frac{\sqrt{3}}{2}\right)\right] = 0$$

$\therefore t \approx 4.5$ s

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #38: (09-Feb-09)

Option 1 is not clearly suitable for a concluding sentence because it suddenly starts talking about the concern being not limited to 'vegetarians' and 'vegans'.
Option 2 is not an effective conclusion because it is completely disconnected with the penultimate statement in the paragraph.
Option 3 concludes only the example given- good enough but not when compared to option 5.
Option 4 exhibits the same flaw as option 2. It is disconnected with the penultimate statement of the paragraph.
Option 5 brings in the major issue of what we should be doing to prevent such cruelty to farm animals in future and concludes the paragraph. It also effectively addresses the ethics part in the paragraph.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #39: (10-Feb-09)

Let speed the of river stream, Shyam and Ram be *y* km/hr, *x* km/hr and 2*x* km/hr respectively.

Now, maximum head start can be given when someone is moving downstream and other is moving upstream.

Case 1: When Ram is moving downstream and Shyam is moving upstream

$$\left(\frac{320}{2x+y}\right)+70=\frac{320}{x-y} \qquad \ldots (i)$$

Case 2: When Shyam is moving downstream and Ram is moving upstream

$$\left(\frac{320}{x+y}\right)+4=\frac{320}{2x-y} \qquad \ldots (ii)$$

Solving equations (i) and (ii), we get,

$x = 12$ and $y = 8$

∴ Speed of Ram = $2x = 24$ km/hr

Hence, option 2.

Discuss the solution with Testfunda users.

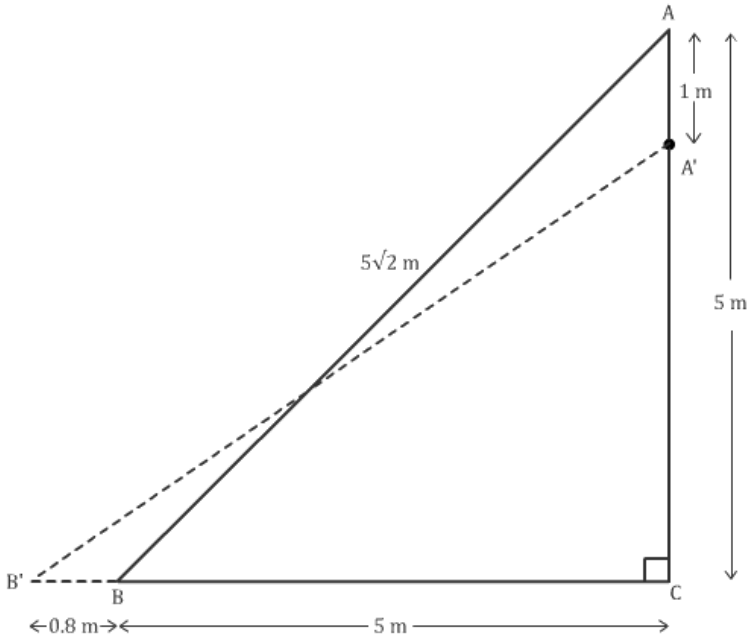
Solution #40: (11-Feb-09)

"… He is writing about philosophers' own deaths, exemplary deaths or philosophers' thoughts on death in general." This is how paragraph B ends. Therefore the 'first topic' and 'the second topic' in the paragraph C give us enough clues to retain the sequence BC. After the two topics are mentioned, paragraph A simply places itself after BC, with 'which leaves' us with the third topic explicitly mentioned (what philosophers have thought about death).

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #41: (12-Feb-09)



Let AB denote the initial position of the ladder and A'B' denote position of the ladder after it slipped. Let B'-B-C denote the ground and A-A'-C denote the wall.

The ladder, the wall and the ground form a right angled triangle.

In the first case, we know that the two sides of the triangle other than the hypotenuse are both equal to 5 m.

Using Pythagoras theorem, we get,

$$\text{Hypotenuse} = 5\sqrt{2}\text{m}$$

In the second case, we know that the top end is at a distance of 4 m from the ground.

$$\text{The length of the ladder (the hypotenuse) is still } 5\sqrt{2}\text{ m}$$

$$\therefore \text{Distance by which the bottom end slipped} = \sqrt{34} - 5$$

≈ 0.8 m

Hence, option 2.

Discuss the solution with Testfunda users.

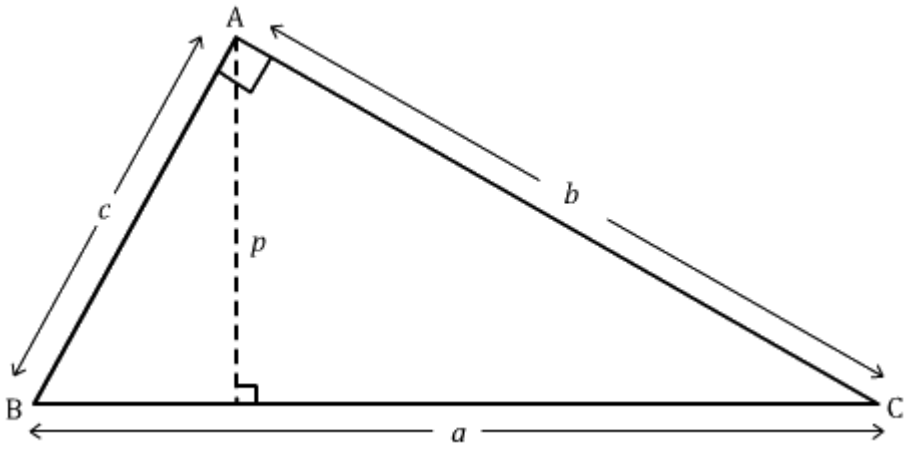
Solution #42: (13-Feb-09)

Blank 1 fits in better with the word 'imagination' than 'wisdom' or 'thought' in this context since giving apt names calls more for 'imagination' than 'wisdom' or 'thought'.
In blank 2, the word 'habits' fits in better as compared to 'history'. Migratory patterns of wild geese have more to do with 'habits' rather than with 'history'.The word 'zoology' is out of context. This eliminates options 1, 4 and 5.
Birds flying back and forth repeatedly from one destination to the other can be referred to as migrations. Therefore the word 'migrate' fits in with blank 3.
In blanks 4 and 5, the words 'resemblance' and 'inspiration' respectively fit in correctly. In blank 5 the word needs to be more than just thought i.e. Imagination. This eliminates option 2.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #43: (14-Feb-09)



Let the hypotenuse of the right triangle be a.

∴ Using Pythagoras Theorem, we get,

$$a^2 = b^2 + c^2$$

Also, the area of the triangle $= \left(\frac{1}{2}\right) \times a \times p = \left(\frac{1}{2}\right) \times b \times c$

$$\therefore a = \frac{bc}{p}$$

$$\therefore a^2 = \frac{b^2c^2}{p^2} = b^2 + c^2$$

Dividing by b^2c^2, we get,

$$\frac{1}{p^2} = \frac{1}{b^2} + \frac{1}{c^2}$$

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #44: (15-Feb-09)

Statements I A D or I A B do not have a coherent flow. Therefore, we can eliminate options 1 and 3. Statements CD have disconnected ideas between them, hence can't go together. Option 5 gets eliminated.
'Most of the papers in the present collection of the sayings' in statement B should precede 'To these utterances in 'A'. Therefore, statement B should come before A. Since option 2 has already been eliminated, option 5 is the correct answer.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #45: (16-Feb-09)

Let ABCD be the square base of the pyramid with centre at point O. Let point P be the top vertex of the pyramid and point Q be the midpoint of side BC.

∵ CD = 230 m (side of the base of the pyramid)

∴ OC = 230/√2 m ≈ 163 m

∴ Height OP = 163 × tan (60°) ≈ 282 m

Now, OQ = 230/2 = 115 m

In right triangle POQ,

Using Pythagoras theorem,

Slant height PQ ≈ 305 m

∴ Sum of height and slant height ≈ 282 + 305 ≈ 587 m

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #46: (17-Feb-09)

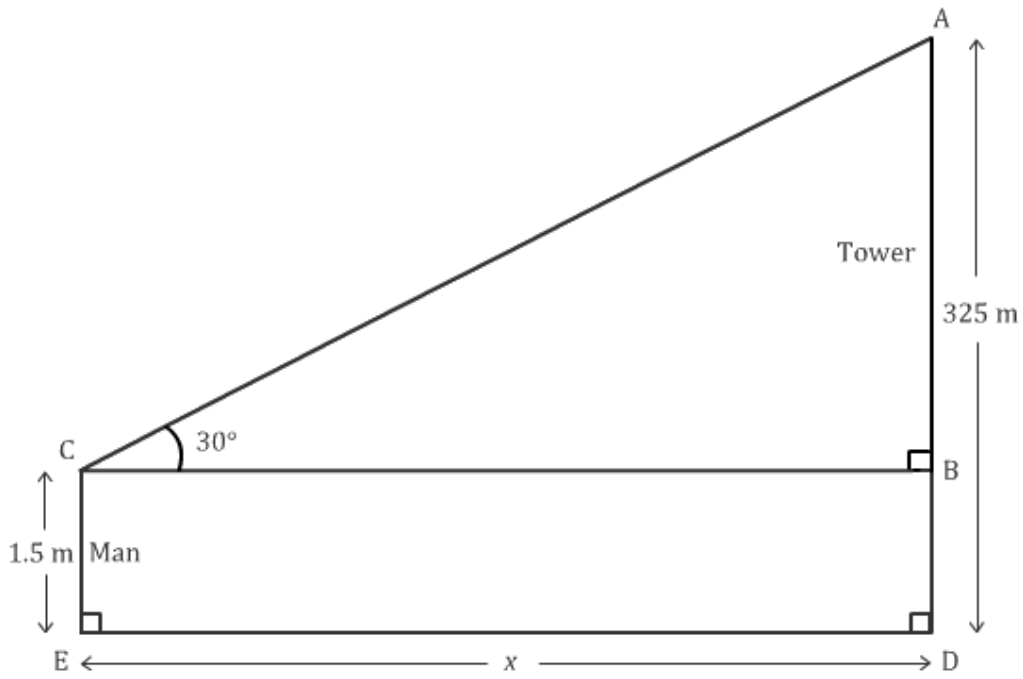
The meanings of the words are as follows.

1. ‘coup de grace’: ‘finishing blow’.
2. ‘prima facie’: ‘at first sight, clear and evident.’
3. ‘quid pro quo’: ‘something for something; an equal exchange’.
4. ‘veni, vidi, vici’: ‘I came, I saw, I conquered’.
5. ‘haute couture’: ‘high fashion’.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #47: (18-Feb-09)



The height of the tower above the line of sight of the man = 325 - 1.5 = 323.5 m

Now, tan30° = 323.5/*x*, where *x* is the distance of the tourist from the base of the tower.

∴ 1/√3 = 323.5/*x*

∴*x* = 323.5√3 ≈ 323.5 × 1.73 ≈ 560 m

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #48: (19-Feb-09)

Statement C is incorrect. 'something else was *at* stake', will be correct.
Statement D is incorrect in the idiom- there is *enough to go*. The correct idiom is; *enough to go around* which means enough to share or distribute.
In statement E 'persons' should have an apostrophe – *person's*, it's possessive.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #49: (20-Feb-09)

Let the initial population of towns A and B be *P*.

$$\text{The population of town A after 3 years} = P\left[1+\left(\frac{x}{100}\right)\right]^3$$

$$\text{The population of town B after 3 years} = P + 3 \times \left(\frac{39.9}{100}\right)P$$

∵ The population of town A and B is equal after 3 years.

$$\therefore P\left[1+\left(\frac{x}{100}\right)\right]^3 = P + 3 \times \left(\frac{39.9}{100}\right)P$$

$$\therefore \left[1+\left(\frac{x}{100}\right)\right]^3 = 1 + 3 \times \left(\frac{39.9}{100}\right)$$

$$\therefore \left[1+\left(\frac{x}{100}\right)\right]^3 = 1 + 1.197 = 2.197$$

Since 2197 is the cube of 13, 2.197 is the cube of 1.3

$$\therefore 1+\left(\frac{x}{100}\right) = 1.3$$

$$\therefore \frac{x}{100} = 0.3$$

∴ x = 30%
Hence, option 2.

Discuss the solution with Testfunda users.

Solution #50: (21-Feb-09)

In statement B, '...but it is also untrue' - is the correct structure. Not only … but also … are correlative conjunctions, the structures following them should match each other closely. In this sentence however, the 'not only' element contains a verb, whereas the 'but also' element does not.
In statement D, the second half of the statement should be - '...and because oil prices rose dramatically...'. You cannot use the because of in the beginning of the sentence to also cover for the second half. It is a faulty ellipsis.

Hence, the correct answer is option 1.
Discuss the solution with Testfunda users.

About TestFunda.com

TestFunda.com is an initiative by Enabilion Learning Private Limited. Enabilion is a sister-concern of Zeus Learning, an e-learning solutions company. Products designed and created by us are currently being used in thousands of US schools and colleges. Clients include some of the world's largest publishers and developers of educational software: Discovery Education, Reader's Digest, Pearson Education, etc.

TESTfunda.com is managed by four IIT-IIM Alumni. It has an 85+ member team of Educationists, Instructional Designers and Systems Architects with vast experience in MBA Coaching and Computer-Based Training and Testing. The TestFunda Team has 9 years of experience designing and creating international award-winning eLearning courses.