



Section : Verbal Ability

QNo:- 1 ,Correct Answer:- D

Explanation:- The answer can be drawn from lines "these similarities allowed for **more rapid**.....African American and most foreign immigrants." which clearly contrasts the idea taken from the passage. Therefore option 4 is right answer.

QNo:- 2 ,Correct Answer:- D

Explanation:- option 4 is correct as it has all the important words/phrases.

option 1 misses **Social Organisation**

option 2 misses **Chicago School**

option 3 misses **Migration**

QNo:- 3 ,Correct Answer:- A

Explanation:- According to the question we need to select an option which supports the authors note i.e. **out - migration** from rural to urban therefore :

option 1 is correct

Rest of the options support the idea that there were more population in rural than in urban which contradicts the the out -migration

QNo:- 4 ,Correct Answer:- D

Explanation:- according to the passage '**social disorganisation**' is the key term predominantly present in all the paragraphs hence must be the of fundamental conclusion by the author therefore:

option 4 is the correct option

QNo:- 5 ,Correct Answer:- A

Explanation:- option 1 is the most appropriately inferred from the passage.

option 2 is an extreme option because of '**.....forced them.....**' therefore cannot be an answer.

option 3 is taken from the passage's paragraph 5 hence can not be an inference.

option 4 there is no information shared related to '**type of digital template**' in the passage therefore cannot be an inference.

QNo:- 6 ,Correct Answer:- C

Explanation:- The inference can be drawn from the 2nd paragraph which highlights that the people using simple software developed better strategies and made fewer mistakes whereas people having access to the advanced software short-circuited their thinking and learning. Therefore option C is appropriate. Here 'aimlessly click around' means looking for solutions of tricky situation unsuccessfully.

QNo:- 7 ,Correct Answer:- D

Explanation:- We can infer all the given options except D as the author nowhere in the passage supported the view that computers or technology can be an appropriate replacement of humans.

the passage is an argumentative writing which is biased towards human skills there option A, B and c can be inferred easily.

QNo:- 8 ,Correct Answer:- B

Explanation:- Option B is correct answer because in this option, the automation is helping a software hence being a machine-centric.

Option A,C and D are examples of human-centric because the automation involved helps the human directly.

QNo:- 9 ,Correct Answer:- A

Explanation:- Refer to the second line of last paragraph- '**The meanings of the "mechanical" perceived as alive.**' Author here most likely suggests that meanings of "mechanical" and "life" have stretched to such extent that any difference between the two is blurred now. Living things have been endowed with technological advancements. Similarly there has been a constant effort to sensitivize the machines to make it look more natural.

Rest all other options are wrong or ambiguous interpretations of the given statement.



QNo:- 10 ,Correct Answer:- B

Explanation:- Throughout the passage the author tried to imply that there is almost negligible difference between genetic engineers and bioengineers; earlier ones have been trying to alter with genetic makeup for its advancement and the later ones have been trying to sensitivize machines with human qualities. So the answer that should follow is option 2. Rest of the options can't be deduced from the passage.

QNo:- 11 ,Correct Answer:- C

Explanation:- In the beginning of the passage (second paragraph), author suggests how complex the nature around us is (**a cell, a meadow, an economy or human brain**). Then he moves on to propound that we borrowed a lot from nature, including her logic too. It is followed by explanation of bio-engineering and technological advancement and how they are converging into being one and the same. So the right answer option 3. No other options include all of these aspects.

QNo:- 12 ,Correct Answer:- A

Explanation:- In the last paragraph, author concludes that the machines and the humans have more or less become the same. Not just have the scientists endowed the humans with technology, but they have tried to make the machines more realistic like humans. So the right option is 1. Rest all other options are strayed from the correct interpretation of the given statement.

QNo:- 13 ,Correct Answer:- A

Explanation:- Option A is correct answer because the author did not talk about European colonisers in particular but British in the last line of the passage. The meaning of '**salve**' is to promote healing. Option B, C and D can be traced in the passage easily.

QNo:- 14 ,Correct Answer:- D

Explanation:- Option D is correct because throughout the passage the author highlighted that India did not match the technical knowledge of the West "**little attention was given to the more tangible aspects.**" Option A, B, and C goes well with the author's point of view.

QNo:- 15 ,Correct Answer:- D

Explanation:- Option D is correct because according to the passage, the style of research taken by the Orientalist scholars' involved a very superficial approach and did not bother to read any authentic literature, accounts or study any artifacts which is there in Options A, B, and C therefore making D as the correct option.

QNo:- 16 ,Correct Answer:- B

Explanation:- Option B is correct because developing an oppositional framework only introduces a segregation and division in the society, it doesn't help in gain a more accurate view of a nation's history and culture therefore scholars should not follow the same.

to attempt this question one must know the meaning of '**oppositional framework**' in context to the passage.

QNo:- 17 ,Correct Answer:- 2314

Explanation:- The opening sentence is 2 because it introduces the subject of the conversation, i.e. the narrator's mum, the narrator, and her sister. Further, 2-3 is a pair: "Me and my sister" mentioned in 2, are referred to as "us" in 3. Also, 3-1 is a pair as the trees and the streams mentioned in 3 have been referenced further in 1 with the phrase "going outside to "enjoy it while it lasts". The final sentence is 4 because the "threat" being referred to in the given sentence, is mentioned in the previous sentence, "made to feel guilty about not going outside". The right sequence is thus 2314.

QNo:- 18 ,Correct Answer:- A

Explanation:- The paragraph above says claims that alphabetical order was not an immediate consequence of the alphabet itself. The Middle Ages saw the rejection of alphabetical order due to religious beliefs, and it wasn't until the 16th and 17th centuries, when there was a need for more effective methods of organising and referencing texts as well as a need to deal with government bureaucracy, that alphabetical order began to gain popularity. The paragraph is effectively summarised and all the major points are covered in Option A.



QNo:- 19 ,Correct Answer:- D

Explanation:- In relation to cancel culture, Rowan Atkinson claims that every joke offends someone or something; therefore, jokes about anything should be permitted in a proper free society. Option D effectively sums up the paragraph.

QNo:- 20 ,Correct Answer:- B

Explanation:-

As we read the given text, it becomes clear that the missing sentence is neither a strong introduction nor a fitting end. Therefore, we can quickly eliminate choices 1 and 4.

In the case of option 3, the thoughts are already flowing easily. Most people may benefit from learning something new from those around them and by repeatedly engaging in this learning process over time, you can develop cultural packages that are adapted to the needs of the local region. Option 2 appears to fit the given sentence the most effectively. The phrase "socially acquired information" was used in the previous sentence. The above line shows how people in society learn from one another. The next phrase strengthens the notion that we can learn from those around us. Therefore, option 2 is the best one.

QNo:- 21 ,Correct Answer:- B

Explanation:- This question can be solved by eliminating the wrong choices. We can eliminate option 4 since the previous sentence states that clarity is emerging, therefore the omitted sentence—which talks about uncertainty prevailing—will be a misfit. Option 3 can also be disregarded because the preceding line states that some workers are now returning to their desks. Here, the given sentence seems illogical.

As "this has meant a lot of uncertainty" can fit in well with the sentence before either the options 1 and 2, so, both appear to be good alternatives. However, option 2 makes more sense given the subsequent line and the way the thoughts flow.

QNo:- 22 ,Correct Answer:- 4312

Explanation:- The most apt introductory sentence is 4 as it introduces the subject 'beacons'. 4-3 is a pair: 4 states that beacons send radio frequency signals; 3 further describes that smart phones and other mobile devices capture these signals. 1-2 is also a pair: 1 states that several industrial sectors have started using beacons for tracking and communicating with their customers; 2 further discusses how these beacons are employed to track this information.

4312 is hence the correct order.

QNo:- 23 ,Correct Answer:- 3214

Explanation:- The most suitable opening statement would be 3 as it is general and introduces the subject, i.e. Meritocracy. Further, 3-2 is a pair: 3, it is mentioned that "we are designed to see our achievements as worthy of reward"; 2 discusses about "the raft of recent books" that sheds light on the limitations of this line of thought. Moreover, 2-1 is also a pair as 1 elaborates on the argument stated in 2 about the limits of merit and how realising these limits might make us more tolerant. A more compassionate society will be created as a result, as stated in 4 which comes after 1. The right sequence is 3214.

QNo:- 24 ,Correct Answer:- A

Explanation:- The key point made here is that the spread of social media has made it simple to access fashion ideas from different cultures, making it easier than ever to unethically use these concepts or methods without giving credit to or compensation to the original communities. The focus of the paragraph is best expressed in Option A.

Section : DI & Reasoning

QNo:- 25 ,Correct Answer:- D

Explanation:- From directions 1, 2, 3, 5, 6; we can fill the table as below.

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
	ML	4x	5x	2x	z	
NON CS	2k	AI	0			x
	5k	ML				x

From 7th direction, Total number of non CS students failing in one of the two courses : CS student failing in one of the two courses = 3:1

2x:z = 3:1

Z = 2x/3

From 8th direction, z + x =30



5x/3 = 80

X = 18

So, we can fill values in the table:

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

Also, every student take both the courses in CS. So, number of students in AI = number of students in ML = 210

So, total number of students in CS = 210

K = 30

So, in Non CS, AI students = 60, in Non CS, ML students = 150

Also, 3y + 5y + 2y = 210 implies y = 21.

So, we can put values for the first row.

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

By taking 4th direction, we can have the final table as below:

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0	21	21	18
	5k	ML	27	75	30	18

210 + 60 = 270 ans.

QNo:- 26 ,Correct Answer:- 12

Explanation:- From directions 1, 2, 3, 5, 6; we can fill the table as below.

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
		ML	4x	5x	2x	z
NON CS	2k	AI	0			x
	5k	ML				x

From 7th direction, Total number of non CS students failing in one of the two courses : CS student failing in one of the two courses = 3:1

2x:z = 3:1

Z = 2x/3

From 8th direction, z + x = 30

5x/3 = 80

X = 18

So, we can fill values in the table:

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

Also, every student take both the courses in CS. So, number of students in AI = number of students in ML = 210

So, total number of students in CS = 210

K = 30

So, in Non CS, AI students = 60, in Non CS, ML students = 150

Also, 3y + 5y + 2y = 210 implies y = 21.

So, we can put values for the first row.

CS	7k		A	B	C	F
		AI	63	105	42	0



		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

By taking 4th direction, we can have the final table as below:

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0	21	21	18
	5k	ML	27	75	30	18

12 students failed in ML.

QNo:- 27 ,Correct Answer:- 27

Explanation:- From directions 1, 2, 3, 5, 6; we can fill the table as below.

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
		ML	4x	5x	2x	z
NON CS	2k	AI	0			x
	5k	ML				x

From 7th direction, Total number of non CS students failing in one of the two courses : CS student failing in one of the two courses = 3:1

$2x:z = 3:1$

$Z = 2x/3$

From 8th direction, $z + x = 30$

$5x/3 = 80$

$X = 18$

So, we can fill values in the table:

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

Also, every student take both the courses in CS. So, number of students in AI = number of students in ML = 210

So, total number of students in CS = 210

$K = 30$

So, in Non CS, AI students = 60, in Non CS, ML students = 150

Also, $3y + 5y + 2y = 210$ implies $y = 21$.

So, we can put values for the first row.

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

By taking 4th direction, we can have the final table as below:

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0	21	21	18
	5k	ML	27	75	30	18

27 non CS students got A grade in ML.

QNo:- 28 ,Correct Answer:- C

Explanation:- From directions 1, 2, 3, 5, 6; we can fill the table as below.



CS	7k		A	B	C	F
		AI	3y	5y	2y	0
	ML	4x	5x	2x	z	
NON CS	2k	AI	0			x
	5k	ML				x

From 7th direction, Total number of non CS students failing in one of the two courses : CS student failing in one of the two courses = 3:1

2x:z = 3:1

Z = 2x/3

From 8th direction, z + x = 30

5x/3 = 80

X = 18

So, we can fill values in the table:

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
	ML	72	90	36	12	
NON CS	2k	AI	0			18
	5k	ML				18

Also, every student take both the courses in CS. So, number of students in AI = number of students in ML = 210

So, total number of students in CS = 210

K = 30

So, in Non CS, AI students = 60, in Non CS, ML students = 150

Also, 3y + 5y + 2y = 210 implies y = 21.

So, we can put values for the first row.

CS	7k		A	B	C	F
		AI	63	105	42	0
	ML	72	90	36	12	
NON CS	2k	AI	0			18
	5k	ML				18

By taking 4th direction, we can have the final table as below:

CS	7k		A	B	C	F
		AI	63	105	42	0
	ML	72	90	36	12	
NON CS	2k	AI	0	21	21	18
	5k	ML	27	75	30	18

63.

QNo:- 29 ,Correct Answer:- D

Explanation:- From directions 1, 2, 3, 5, 6; we can fill the table as below.

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
	ML	4x	5x	2x	z	
NON CS	2k	AI	0			x
	5k	ML				x

From 7th direction, Total number of non CS students failing in one of the two courses : CS student failing in one of the two courses = 3:1

2x:z = 3:1

Z = 2x/3

From 8th direction, z + x = 30

5x/3 = 80

X = 18

So, we can fill values in the table:

CS	7k		A	B	C	F
		AI	3y	5y	2y	0
	ML	72	90	36	12	
NON CS	2k	AI	0			18



	5k	ML			18
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Also, every student take both the courses in CS. So, number of students in AI = number of students in ML = 210
 So, total number of students in CS = 210
 $K = 30$
 So, in Non CS, AI students = 60, in Non CS, ML students = 150
 Also, $3y + 5y + 2y = 210$ implies $y = 21$.
 So, we can put values for the first row.

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0			18
	5k	ML				18

By taking 4th direction, we can have the final table as below:

CS	7k		A	B	C	F
		AI	63	105	42	0
		ML	72	90	36	12
NON CS	2k	AI	0	21	21	18
	5k	ML	27	75	30	18

75

QNo:- 30 ,Correct Answer:- B

Explanation:- We know that in 1980, total number of males = total number of females = 1000.
 Also, $1000 = \text{Deaths} + \text{alive people}$
 So, number of deaths of males = $1000 - (180 + 205 + 160 + 100) = 355$
 Number of deaths of females = $1000 - (210 + 175 + 150 + 120) = 345$
 So, required ratio = $355:345 = 71:69$
 So, required ratio = $355:345 = 71:69$

QNo:- 31 ,Correct Answer:- A

Explanation:- If a person falls in the age group (30-40), he/she should fall in (60-70) age group in 2010. So, in third graph, $(90+100) = 190$ would be the answer.

QNo:- 32 ,Correct Answer:- C

Explanation:- Less than 30 years means, we need to take 10-20, 20-30 categories. In 2020, these people would fall in 50-60, 60-70 age group categories. So, answer = $140 + 125 + 50 + 100 + 105 + 60 = 470$. Hence 3rd option.

QNo:- 33 ,Correct Answer:- 40

Explanation:- In 2000, these people will fall in 40-50.
 In 2010, these people will fall in 50-60.
 In 2000, 205 male survivors were there.
 In 2010, 165 male survivors were there.
 That means $205 - 165 = 40$ died in the given period.

QNo:- 34 ,Correct Answer:- 40

Explanation:- In 1980, age (20-30)
 If age (50-60) then year must be 2010.
 From given bar graph, in 2010, 145 females were alive in the age group 50-60.
 But in 2020, 105 females were alive in the age group 60-70.
 i.e. $145 - 105 = 40$ females died when they were of (50-60) age.

QNo:- 35 ,Correct Answer:- D

Explanation:- Let the denotation for Levministro = L, Tyhrministro = T, Pesministro = P and Kitministro = K



The total number of new cases in the city over five-day period

= 12 + 12 + 5 + 14 = 43

Since the new cases in the city kept on increasing every day with Day 3 is exactly one more case than Day 2, the only possibility of new cases for Day 1 = 5, Day 2 = 8, Day 3 = 9, Day 4 = 10 and Day 5 = 11, Total = 43

Further, there is at least one new case on Day 1

Only possibility for Day 1,

L = 1 case, T = 1 case, P = 1 case and K = 2 cases, Total = 5 cases

Also, K is the only place to have 3 new cases on Day 2

And to have total of 12 cases in each L and T

Day 2 = 2 cases, Day 3 = 3 cases, Day 4 = 3 cases and Day 5 = 3 cases

The rest of given information can be gathered as follows-

	Levmisto	Tyhmisto	Pesmisto	Kitmisto	Total
Day 1	1	1	1	2	5
Day 2	2	2	1	3	8
Day 3	3	3	0	3	9
Day 4	3	3	1	3	10
Day 5	3	3	2	3	11
Total	12	12	5	14	43

Now we are ready to answer the questions.

The total number of new cases in the city on Day 2 = exactly 8

QNo:- 36 ,Correct Answer:- B

Explanation:- Let the denotation for Levmisto = L, Tyhmisto = T, Pesmisto = P and Kitmisto = K

The total number of new cases in the city over five-day period

= 12 + 12 + 5 + 14 = 43

Since the new cases in the city kept on increasing every day with Day 3 is exactly one more case than Day 2, the only possibility of new cases for Day 1 = 5, Day 2 = 8, Day 3 = 9, Day 4 = 10 and Day 5 = 11, Total = 43

Further, there is at least one new case on Day 1

Only possibility for Day 1,

L = 1 case, T = 1 case, P = 1 case and K = 2 cases, Total = 5 cases

Also, K is the only place to have 3 new cases on Day 2

And to have total of 12 cases in each L and T

Day 2 = 2 cases, Day 3 = 3 cases, Day 4 = 3 cases and Day 5 = 3 cases

The rest of given information can be gathered as follows-

	Levmisto	Tyhmisto	Pesmisto	Kitmisto	Total
Day 1	1	1	1	2	5
Day 2	2	2	1	3	8
Day 3	3	3	0	3	9
Day 4	3	3	1	3	10
Day 5	3	3	2	3	11
Total	12	12	5	14	43

Now we are ready to answer the questions.

The number of new cases in Levmisto on Day 3 = exactly 3

QNo:- 37 ,Correct Answer:- A

Explanation:- Let the denotation for Levmisto = L, Tyhmisto = T, Pesmisto = P and Kitmisto = K

The total number of new cases in the city over five-day period

= 12 + 12 + 5 + 14 = 43

Since the new cases in the city kept on increasing every day with Day 3 is exactly one more case than Day 2, the only possibility of new cases for Day 1 = 5, Day 2 = 8, Day 3 = 9, Day 4 = 10 and Day 5 = 11, Total = 43

Further, there is at least one new case on Day 1

Only possibility for Day 1,

L = 1 case, T = 1 case, P = 1 case and K = 2 cases, Total = 5 cases

Also, K is the only place to have 3 new cases on Day 2

And to have total of 12 cases in each L and T

Day 2 = 2 cases, Day 3 = 3 cases, Day 4 = 3 cases and Day 5 = 3 cases

The rest of given information can be gathered as follows-

	Levmisto	Tyhmisto	Pesmisto	Kitmisto	Total
Day 1	1	1	1	2	5
Day 2	2	2	1	3	8
Day 3	3	3	0	3	9
Day 4	3	3	1	3	10
Day 5	3	3	2	3	11
Total	12	12	5	14	43



Now we are ready to answer the questions.
Only on Day 3, Pesmisto did not have any new case

QNo:- 38 ,Correct Answer:- B

Explanation:- Let the denotation for Levpisto = L, Tyhrpisto = T, Pespisto = P and Kitpisto = K
The total number of new cases in the city over five-day period
= 12 + 12 + 5 + 14 = 43

Since the new cases in the city kept on increasing every day with Day 3 is exactly one more case than Day 2, the only possibility of new cases for Day 1 = 5, Day 2 = 8, Day 3 = 9, Day 4 = 10 and Day 5 = 11, Total = 43

Further, there is at least one new case on Day 1

Only possibility for Day 1,

L = 1 case, T = 1 case, P = 1 case and K = 2 cases, Total = 5 cases

Also, K is the only place to have 3 new cases on Day 2

And to have total of 12 cases in each L and T

Day 2 = 2 cases, Day 3 = 3 cases, Day 4 = 3 cases and Day 5 = 3 cases

The rest of given information can be gathered as follows-

	Levmisto	Tyhrpisto	Pespisto	Kitpisto	Total
Day 1	1	1	1	2	5
Day 2	2	2	1	3	8
Day 3	3	3	0	3	9
Day 4	3	3	1	3	10
Day 5	3	3	2	3	11
Total	12	12	5	14	43

Now we are ready to answer the questions.

Statement A: There were 2 new cases in Tyhrpisto on Day 3

False

Statement B: There were no new cases in Pespisto on Day 2

False

Hence, both Statement a and Statement b are false

QNo:- 39 ,Correct Answer:- B

Explanation:- Let the denotation for Levpisto = L, Tyhrpisto = T, Pespisto = P and Kitpisto = K
The total number of new cases in the city over five-day period
= 12 + 12 + 5 + 14 = 43

Since the new cases in the city kept on increasing every day with Day 3 is exactly one more case than Day 2, the only possibility of new cases for Day 1 = 5, Day 2 = 8, Day 3 = 9, Day 4 = 10 and Day 5 = 11, Total = 43

Further, there is at least one new case on Day 1

Only possibility for Day 1,

L = 1 case, T = 1 case, P = 1 case and K = 2 cases, Total = 5 cases

Also, K is the only place to have 3 new cases on Day 2

And to have total of 12 cases in each L and T

Day 2 = 2 cases, Day 3 = 3 cases, Day 4 = 3 cases and Day 5 = 3 cases

The rest of given information can be gathered as follows-

	Levmisto	Tyhrpisto	Pespisto	Kitpisto	Total
Day 1	1	1	1	2	5
Day 2	2	2	1	3	8
Day 3	3	3	0	3	9
Day 4	3	3	1	3	10
Day 5	3	3	2	3	11
Total	12	12	5	14	43

Now we are ready to answer the questions.

On all 5 days Levpisto and Tyhrpisto have the same number of new cases

QNo:- 40 ,Correct Answer:- C

Explanation:- Since the total amount among them = Rs.40
Some of the values can be distributed as follows.

	Pulak	Qasim	Ritesh	Suresh	Total	Players Grouping
Beginning	Rs.10	Rs.10	Rs.10	Rs.10	Rs.40	
Round 1	+ 2	- 2	0	0		P and Q R and S
	Rs.12	Rs.8	Rs.10	Rs.10	Rs.40	
Round 2	+ 1	+ 2	- 1	- 2		P and R Q and S
	Rs.13	Rs.10	Rs.9	Rs.8	Rs.40	



	-1	+1	-2	+2		P and Q	R and S
Round 3	Rs.12	Rs.11	Rs.7	Rs.10	Rs.40		
	-2	+1	-1	+2		P and S	R and Q
	Rs.11	Rs.11	Rs.8	Rs.10	Rs.40		
Round 4	0	0	-2	+2		P and Q	R and S
	Rs.11	Rs.11	Rs.6	Rs.12	Rs.40		
Round 5	-1	-1	+1	+1		P and S	Q and R
	Rs.10	Rs.10	Rs.7	Rs.13	Rs.40		
Round 6	+2	+1	-2	-1		P and R	Q and S
	Rs.12	Rs.11	Rs.5	Rs.12	Rs.40		
Round 7	0	+1	-1	0		P and S	Q and R
	Rs.12	Rs.12	Rs.4	Rs.12	Rs.40		
Round 8	+1	-1	+2	-2		P and Q	R and S
	Rs.13	Rs.11	Rs.6	Rs.10	Rs.40		

Now we can answer the questions.

Rs.4 is the minimum amount Ritesh has in any round, so he must have won in Round 8 and gained Rs.2. hence, the amount of money that Ritesh had with him at the end of Round 8 = 4 + 2 = Rs.6

QNo:- 41 ,Correct Answer:- D

Explanation:- Since the total amount among them = Rs.40
Some of the values can be distributed as follows.

	Pulak	Qasim	Ritesh	Suresh	Total	Players Grouping	
Beginning	Rs.10	Rs.10	Rs.10	Rs.10	Rs.40		
Round 1	+2	-2	0	0		P and Q	R and S
	Rs.12	Rs.8	Rs.10	Rs.10	Rs.40		
Round 2	+1	+2	-1	-2		P and R	Q and S
	Rs.13	Rs.10	Rs.9	Rs.8	Rs.40		
Round 3	-1	+1	-2	+2		P and Q	R and S
	Rs.12	Rs.11	Rs.7	Rs.10	Rs.40		
	-2	+1	-1	+2		P and S	R and Q
	Rs.11	Rs.11	Rs.8	Rs.10	Rs.40		
Round 4	0	0	-2	+2		P and Q	R and S
	Rs.11	Rs.11	Rs.6	Rs.12	Rs.40		
Round 5	-1	-1	+1	+1		P and S	Q and R
	Rs.10	Rs.10	Rs.7	Rs.13	Rs.40		
Round 6	+2	+1	-2	-1		P and R	Q and S
	Rs.12	Rs.11	Rs.5	Rs.12	Rs.40		
Round 7	0	+1	-1	0		P and S	Q and R
	Rs.12	Rs.12	Rs.4	Rs.12	Rs.40		
Round 8	+1	-1	+2	-2		P and Q	R and S
	Rs.13	Rs.11	Rs.6	Rs.10	Rs.40		

Now we can answer the questions.

The money Suresh had in Round 5 = Rs.13 (maximum) and in Round 7 = Rs.12

The only possible way to reach such value is by losing Rs.1 in Round 6 and gaining 0 in Round 7

Also, the money Ritesh had in Round 5 = Rs.7 and in Round 7 = Rs.4

The only possible way to reach such value is by losing Rs.2 in Round 6 and losing Rs.1 in Round 7

Considering that, the amount of money that Pulak had with him at the end of Round 6 = Rs.10 + 2 = Rs.12

QNo:- 42 ,Correct Answer:- 6

Explanation:- Since the total amount among them = Rs.40
Some of the values can be distributed as follows.

	Pulak	Qasim	Ritesh	Suresh	Total	Players Grouping	
Beginning	Rs.10	Rs.10	Rs.10	Rs.10	Rs.40		
Round 1	+2	-2	0	0		P and Q	R and S
	Rs.12	Rs.8	Rs.10	Rs.10	Rs.40		
Round 2	+1	+2	-1	-2		P and R	Q and S
	Rs.13	Rs.10	Rs.9	Rs.8	Rs.40		
Round 3	-1	+1	-2	+2		P and Q	R and S
	Rs.12	Rs.11	Rs.7	Rs.10	Rs.40		
	-2	+1	-1	+2		P and S	R and Q



	Rs.11	Rs.11	Rs.8	Rs.10	Rs.40		
Round 4	0	0	- 2	+ 2		P and Q	R and S
	Rs.11	Rs.11	Rs.6	Rs.12	Rs.40		
Round 5	- 1	- 1	+ 1	+ 1		P and S	Q and R
	Rs.10	Rs.10	Rs.7	Rs.13	Rs.40		
Round 6	+ 2	+ 1	- 2	- 1		P and R	Q and S
	Rs.12	Rs.11	Rs.5	Rs.12	Rs.40		
Round 7	0	+ 1	- 1	0		P and S	Q and R
	Rs.12	Rs.12	Rs.4	Rs.12	Rs.40		
Round 8	+ 1	- 1	+ 2	- 2		P and Q	R and S
	Rs.13	Rs.11	Rs.6	Rs.10	Rs.40		

Now we can answer the questions.

The money (in Rs.) Ritesh had at the end of Round 4 = Rs.6

QNo:- 43 ,Correct Answer:- 6

Explanation:- Since the total amount among them = Rs.40

Some of the values can be distributed as follows.

	Pulak	Qasim	Ritesh	Suresh	Total	Players Grouping	
Beginning	Rs.10	Rs.10	Rs.10	Rs.10	Rs.40		
Round 1	+ 2	- 2	0	0		P and Q	R and S
	Rs.12	Rs.8	Rs.10	Rs.10	Rs.40		
Round 2	+ 1	+ 2	- 1	- 2		P and R	Q and S
	Rs.13	Rs.10	Rs.9	Rs.8	Rs.40		
Round 3	- 1	+ 1	- 2	+ 2		P and Q	R and S
	Rs.12	Rs.11	Rs.7	Rs.10	Rs.40		
	- 2	+ 1	- 1	+ 2		P and S	R and Q
Round 4	0	0	- 2	+ 2		P and Q	R and S
	Rs.11	Rs.11	Rs.6	Rs.12	Rs.40		
Round 5	- 1	- 1	+ 1	+ 1		P and S	Q and R
	Rs.10	Rs.10	Rs.7	Rs.13	Rs.40		
Round 6	+ 2	+ 1	- 2	- 1		P and R	Q and S
	Rs.12	Rs.11	Rs.5	Rs.12	Rs.40		
Round 7	0	+ 1	- 1	0		P and S	Q and R
	Rs.12	Rs.12	Rs.4	Rs.12	Rs.40		
Round 8	+ 1	- 1	+ 2	- 2		P and Q	R and S
	Rs.13	Rs.11	Rs.6	Rs.10	Rs.40		

Now we can answer the questions.

6 games were played with a bet of Rs.2.

QNo:- 44 ,Correct Answer:- A

Explanation:- Since the total amount among them = Rs.40

Some of the values can be distributed as follows.

	Pulak	Qasim	Ritesh	Suresh	Total	Players Grouping	
Beginning	Rs.10	Rs.10	Rs.10	Rs.10	Rs.40		
Round 1	+ 2	- 2	0	0		P and Q	R and S
	Rs.12	Rs.8	Rs.10	Rs.10	Rs.40		
Round 2	+ 1	+ 2	- 1	- 2		P and R	Q and S
	Rs.13	Rs.10	Rs.9	Rs.8	Rs.40		
Round 3	- 1	+ 1	- 2	+ 2		P and Q	R and S
	Rs.12	Rs.11	Rs.7	Rs.10	Rs.40		
	- 2	+ 1	- 1	+ 2		P and S	R and Q
Round 4	0	0	- 2	+ 2		P and Q	R and S
	Rs.11	Rs.11	Rs.6	Rs.12	Rs.40		
Round 5	- 1	- 1	+ 1	+ 1		P and S	Q and R
	Rs.10	Rs.10	Rs.7	Rs.13	Rs.40		
Round 6	+ 2	+ 1	- 2	- 1		P and R	Q and S
	Rs.12	Rs.11	Rs.5	Rs.12	Rs.40		
Round 7	0	+ 1	- 1	0		P and S	Q and R



	Rs. 12	Rs. 12	Rs. 4	Rs. 12	Rs. 40		
Round 8	+ 1	- 1	+ 2	- 2		P and Q	R and S
	Rs. 13	Rs. 11	Rs. 6	Rs. 10	Rs. 40		

Now we can answer the questions.
Pulak and Suresh made a pair in round 5.

Section : Quantitative Ability

QNo:- 45 ,Correct Answer:- A

We know that $\frac{\text{Men} \times \text{Days} \times \text{hours}}{\text{work}} = \text{constant}$

$$\text{So, } \frac{M_1 D_1 H_1}{W_1} = \frac{M_2 D_2 H_2}{W_2}$$

Explanation:-

Now, in given question,

$M_1 = N$	$M_2 = N - 10$
$D_1 = 10$	$D_2 = 14$
$H_1 = 7$	$H_2 = 10$
$W_1 = 35$	$W_2 = 65$

$$\text{So, } \frac{N \times 10 \times 7}{35} = \frac{(N - 10) \times 14 \times 10}{65} \Rightarrow N = 140$$

QNo:- 46 ,Correct Answer:- 12

Explanation:- Let us assume

No. of 100 Rs. Cheques = x
 No. of 250 Rs. Cheques = y
 No. of 500 Rs. Cheques = z

provided x, y, z should be integers

$$\text{Given } x + y + z = 100 ; 100x + 250y + 500z = 15250$$

Eliminating x, we get $3y + 8z = 105$

We want to maximise z. If we take $z = 12, y = 3$

No other value of z which is greater than 12 will satisfy equation.

So, answer is 12.

QNo:- 47 ,Correct Answer:- D

Explanation:- We know that if N is an n-digit number containing digit A (a times, say), B (b times, say) then

No. of possible numbers made by using the digits of N = $\frac{n!}{a!b! \dots}$
Sum of such nos. = $\frac{n!}{a!b! \dots} (\text{SOD}) \times (11 \dots 1) \text{ n times}$ Where SOD = sum of digits

$$\text{Required Arithmetic mean} = \frac{\text{Sum of nos.}}{\text{number of nos}}$$

$$= \frac{\frac{3!}{2!} (1111) (1 + 4 + 2 + 1)}{\frac{4!}{2!}} = 2222$$



QNo:- 48 ,Correct Answer:- 60

Explanation:- Let S_m = steps taken by moody in a second when escalator is not moving'

S_e = step taken by escalator in a second.

Let N = number of steps visible when escalator is not moving

$$\text{So, } S_m + S_e = \frac{N}{30}$$

$$2 S_m + S_e = \frac{N}{20}$$

By solving, $S_e = \frac{N}{60}$

So, required time = 60 seconds

QNo:- 49 ,Correct Answer:- B

Explanation:- Sum of the three sides of a quadrilateral is greater than the fourth side.

Therefore, let the fourth side be

$$1 + 2 + 4 > x \text{ or } x < 7$$

$$1 + 2 + x > 4 \text{ or } x > 1$$

Possible values of d are 2, 3, 4, 5 and 6.

QNo:- 50 ,Correct Answer:- B

$$\frac{x^2 - 6x + 10}{3 - x} = \frac{x^2 - 6x + 9 + 1}{3 - x} = \frac{(3 - x)^2 + 1}{3 - x} = 3 - x + \frac{1}{3 - x}$$

Since $x < 3 \Rightarrow 3 - x > 0$. Also $\frac{1}{3 - x} > 0$

Also, we know $\left(y + \frac{1}{y}\right)$'s minimum value is 2.

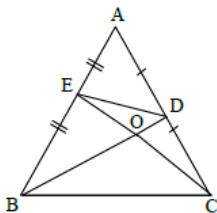
Explanation:-

So, Ans. is 2nd option i.e. 2

Proof of $\left(y + \frac{1}{y}\right)$'s minimum value

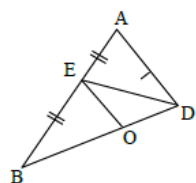
$$\text{If } y \text{ is +ve, then we know A.M.} \geq \text{G.M. } \frac{y + \frac{1}{y}}{2} \geq \sqrt{y \times \frac{1}{y}} \Rightarrow y + \frac{1}{y} \geq 2.$$

QNo:- 51 ,Correct Answer:- 9



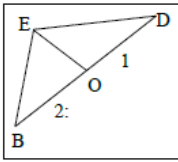
Explanation:-

We know that median always divides the into two equal parts area wise. So, ΔABD 's Area = $\frac{1}{2} \times 108 = 54$ sq units as BD is a median of ΔABC .



If we consider ΔABD , ED is median

$$\text{So, Ar } (\Delta BED) = \frac{1}{2} \times 54 = 27 \text{ sq units.}$$



Since O is centroid and divides median in 2 : 1.

$$Ar(\Delta EOD) = \frac{1}{3} \times 27 = 9 \text{ sq units}$$

QNo:- 52 ,Correct Answer:- 11

Explanation:- B can finish job in 40 days. Since A is twice as fast as B. Since A can finish job in 20 days. Similarly C can finish job in 60 days.

Let us assume total work is 120 unit

So, A's 1 day work = 6 u

B's 1 day work = 3 u

C's 1 day work = 2 u

Order of their working is,

AB, BC, CA, AB, BC, CA, -----

In span of 3 days, work done = 2 (6 + 3 + 2) = 22 u.

So, In span of 15 (i.e. 3 × 5) days, work done = 22 × 5 = 110 u.

On 16th day, AB together will do 9 units of work.

On 17th day, BC will work together to finish remaining 1 unit of work.

So, in these 17 days, A will work for 2 × 5 + 1 = 11 days.

QNo:- 53 ,Correct Answer:- A

Explanation:- We will go by option:

Let us check at $x = r$

$$\begin{aligned} f(f(x)) &= f(2x - r) \text{ (by definition)} \\ &= f(2x - r) \\ &= f(r) \\ &= 2x - r = r = f(x) \end{aligned}$$

So, $f(f(x)) = f(x)$ when $x = r$.

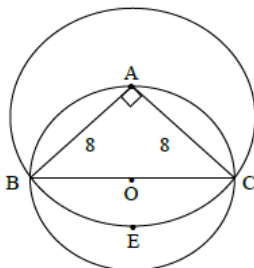
So, option (3) & (4) are out.

Now let us assume $x < r$

$$\begin{aligned} f(f(x)) &= f \textcircled{r} \text{ (by definition)} \\ &= 2r - r \quad \text{(Since } r = r) \\ &= r \\ &= f(x) \end{aligned}$$

So, option (1) is answer

QNo:- 54 ,Correct Answer:- A



Explanation:-

Since ABC is an isosceles

$$\text{Right angled } \Delta \text{ So, } BC = \sqrt{8^2 + 8^2} = 8\sqrt{2}$$

$$\text{So, radius} = 4\sqrt{2}$$

Area of Semi - circle with

$$\text{diameter } BC = \frac{1}{2} \times \pi (4\sqrt{2})^2 = 16\pi$$

Area of the segment BEOC

$$= \text{Area of sector} - \text{Area of } \Delta ABC$$

$$= \frac{90}{360} \times \pi (8)^2 - \frac{1}{2} \times 8 \times 8 = 16\pi - 32$$

So, area of the overlapping region = $16\pi + 16\pi - 32 = 32(\pi - 1)$



QNo:- 55 ,Correct Answer:- B

	Glass		Cup	
	Milk	Water	Milk	Water
Original	500	0	0	500
1 st transfer	350	0	150	500
2 nd transfer	$350 + \frac{3}{13} \times 150$	$\frac{10}{13} \times 150$	$150 - \frac{3}{13} \times 150$	$500 - \frac{10}{13} \times 150$

Explanation:-

$$\text{Required ratio} = \frac{10}{13} \times 150 : 150 - \frac{3}{13} \times 150 = 1 : 1$$

QNo:- 56 ,Correct Answer:- 14

$$\left(\sqrt{\frac{7}{5}}\right)^{3x-y} = \frac{875}{2401} \Rightarrow \left(\sqrt{\frac{7}{5}}\right)^{\frac{3x-y}{2}} = \frac{7 \times 5^3}{7^4} = \left(\frac{5}{7}\right)^3 = \left(\frac{7}{5}\right)^{-3}$$

$$\Rightarrow \frac{3x-y}{2} = -3 \Rightarrow 3x - y = -6 \quad \text{---(1)}$$

Explanation:-

$$\text{Also, } \left(\frac{4a}{b}\right)^{6x-y} = \left(\frac{2a}{b}\right)^{y-6x} \Rightarrow (2^2)^{6x-y} \left(\frac{a}{b}\right)^{6x-y} = 2^{y-6x} \left(\frac{a}{b}\right)^{y-6x}$$

$$\text{If we compare alike bases, we get } 6x - y = y - 6x \Rightarrow y = 6x. \quad \text{---(2)}$$

Put (2) in (1),

$$x = 2, y = 12.$$

$$\text{So, } x + y = 14.$$

QNo:- 57 ,Correct Answer:- 63

Explanation:- Given

	Avg.	No. of students
A	32	x
B	60	x + 10

$$\begin{aligned} \text{Pooled Average} &= \frac{32x + 60(x+10)}{x + x + 10} = \frac{92x + 600}{2x + 10} = \frac{46x + 300}{x + 5} \\ &= \frac{46(x+5) + 70}{x + 5} = 46 + \frac{70}{x + 5} = \text{integer} \end{aligned}$$

So, x + 5 is a factor of 70.

$$x + 5 = 70 \text{ (Max), } 7 \text{ (Min)}$$

$$x = 65 \text{ (Max), } 2 \text{ (Min)}$$

$$\text{Required difference} = 65 - 2 = 63.$$

QNo:- 58 ,Correct Answer:- B

Explanation:- $2x^2 + kx + 5 = 0$ has no real roots. So, $D < 0$

$$\Rightarrow k^2 - 40 < 0 \Rightarrow k^2 < 40 \Rightarrow k \leq 6 \text{ } (\because k \text{ is an integer}) \quad \text{---(1)}$$

Also, $x^2 + (k - 5)x + 1 = 0$ has 2 distinct real roots.

$$\text{So, } D > 0 \Rightarrow (k - 5)^2 - 4 \times 1 \times 1 > 0$$

$$\Rightarrow k^2 - 10k + 21 > 0$$

$$\Rightarrow (k - 3)(k - 7) > 0$$

$$\Rightarrow k < 3 \text{ or } k > 7 \quad \text{---(2)}$$

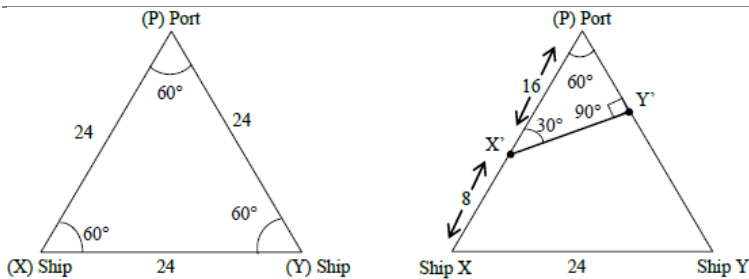
So, k = 2, 1, 0, -1, -2, -3, -4, -5, -6 i.e. 9 values.

QNo:- 59 ,Correct Answer:- A

Explanation:- Starting stage of ships =

Let ship x is slower

than ship Y



When ship x has travelled 8 kms., P x'y' becomes right angled Δ.
 Of course, P X' > P Y'
 So, ∠P Y'X' = 90°
 PY' = 8 (By manipulating 30° - 60° - 90° combination)
 i.e. ship Y has covered 24 - 8 = 16 kms.
 So ratio of their speeds is 2 : 1
 When ship Y will reach the port P (i.e. 8 kms); ship X
 must have covered 4 kms. So, remaining distance = 24 - (8 + 4) = 12 kms

QNo:- 60 ,Correct Answer:- 150

Explanation:- By looking at the first line of the question, we can say number of students should be of type 9k + 4, 10m + 4, 12l + 4, 25 s + 4 & 11 t.
 So, let us try to find the number which when divided by 9, 10, 12 or 25 is leaving remainder 4.
 i.e. number should be of type p (LCM (9, 10, 12, 25)) + 4 = 900 p + 4

= 891 p + (9p + 4)
 i.e. 9p + 4 should be divisible by 11.
 ⇒ p = 2, 13, 24, ----- The greatest number of student is 1804.
 So at the most 15 teams can be made.

QNo:- 61 ,Correct Answer:- A

Explanation:- Given speed of slower car = 60 kmph.
 It is given that both cars took 1.5 hours to meet if travelling towards each other.
 So, Required distance = 60 × 1.5 = 90 kms.

QNo:- 62 ,Correct Answer:- A

Explanation:- Let a < b < c < d < e < f be 6 distinct natural numbers.
 Given e + f = 56, a + b = 28
 If average of all 6 numbers to be maximised, c & d has to be maximum i.e. 'e' has to be maximum.
 So, e = 27, f = 29. Therefore, we can take d = 26, 25 = c

$$\text{Reqd. Avg.} = \frac{(a + b) + c + d + (e + f)}{6} = \frac{28 + 26 + 25 + 56}{6} = 22.5$$

QNo:- 63 ,Correct Answer:- C

$$C = \frac{16x}{y} + \frac{49y}{x}$$

$$= 16\left(\frac{x}{y}\right) + \frac{49}{\left(\frac{x}{y}\right)}$$

$$= \frac{16\left(\frac{x}{y}\right)^2 + 49}{\left(\frac{x}{y}\right)} \Rightarrow 16\left(\frac{x}{y}\right)^2 - \left(\frac{x}{y}\right)C + 49 = 0$$

Let $\frac{x}{y} = s$

Explanation:-
 So, equation becomes, $16s^2 - Cs + 49 = 0$
 Since x & y are real & non - zero, $\frac{x}{y}$ is also
 Real D = $b^2 - 4ac \geq 0$



$$\Rightarrow C^2 - 4 \times 16 \times 49 \geq 0$$

$$\Rightarrow C^2 \geq (2 \times 4 \times 7)^2$$

$$\Rightarrow C \leq -56 \text{ or } C \geq 56$$

So, -50 is not possible option 3 is the answer

QNo:- 64 ,Correct Answer:- 548

Explanation:- All the terms in given A.P are of the form $(17k + 4)$ where $k = 2, 3, 4, \dots$

We can observe $k = 16$ will give first 3 digit term of the given AP.

So, 106 will be the first term.

Let us find greatest 3 digit term of the given A.P

999 when divided by 17 gives remainder 13.

So, 986 is the greatest 3 digit number which is divisible by 17. i.e. $986 + 4 = 990$ is the required number.

So, said sum will be the A.P 106, 123,, 990

$$\text{Number of terms} = \frac{990 - 106}{17} + 1 = \frac{884}{17} + 1 = 52$$

$$\text{Average} = \frac{106 + 990}{2} = 548$$

QNo:- 65 ,Correct Answer:- D

Since a, b, c, m, n are integers. So, other roots of both equations are $3 - 2\sqrt{2}$ & $4 - 2\sqrt{3}$ respectively.

Eq. having $3 + 2\sqrt{2}$ & $3 - 2\sqrt{2}$ roots:-

$$x^2 - (3 + 2\sqrt{2} + 3 - 2\sqrt{2})x + (3 + 2\sqrt{2})(3 - 2\sqrt{2}) = 0$$
$$\Rightarrow x^2 - 6x + 1 = 0$$

Eq. having $4 - 2\sqrt{3}$ & $4 + 2\sqrt{3}$ roots:-

$$x^2 - 8x + 4 = 0$$

$a = 1, b = -6, c = 1, m = -8, n = 4$

$$\text{So, } \frac{b}{m} + \frac{c - 2b}{n} = \frac{-6}{-8} + \frac{1 - 2(-6)}{4} = 4$$

Explanation:-

QNo:- 66 ,Correct Answer:- A

$$\text{Interest by bank A} = \frac{8000 \times 5.5}{100}$$

$$\text{Interest by bank B} = \frac{5000 \times 5.6}{100}$$

$$\text{Interest by bank C} = \frac{7000 \times x}{100}$$

Explanation:-

$$\text{Given} = \frac{8000 \times 5.5}{100} + \frac{5000 \times 5.6}{100} + \frac{7000 \times x}{100} = \frac{20000 \times 5}{100}$$

$$\Rightarrow 440 + 280 + 70x = 1000 \Rightarrow x = 4$$

$$\text{Required interest} = \frac{20000 \times 4 \times 1}{100} = 800$$