

Reasoning

Data Sufficiency

Level-2

Q1 The questions below consist of three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and answer the question

Six persons P, Q, R, S, T, and U are standing in a row facing north in increasing order of their heights from right to left. That means the shortest one stands at the rightmost end while the tallest one stands at the leftmost end.

Who among the following is the second tallest?

I. Q is just shorter than T who is not shorter than P. P height is 170 cm. P is standing on the left S and is not the second tallest among all.

II. R's height is 153 cm. P is not an immediate neighbour of T. U is not the shortest.

III. More than two persons are standing to the right of P. Q and S are taller than R.

- (A) Statement I and Statement II together are sufficient
- (B) Statement II and Statement III together are sufficient
- (C) Statement I and Statement III together are sufficient
- (D) All the statements I, II, and III together are sufficient
- (E) Either two of the given statements are sufficient

Q2 The questions below consist of three statements numbered I, II, and III given below

it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and answer the question

In a family there are 9 members i.e. A, B, C, D, E, F, G, H, and I have three generations.

How is H related to D?

I. C is the unmarried brother of A. F is the sister-in-law of A. There are two married couples in the family.

II. I is the father-in-law of H who is the father of B. E is the daughter of F. A is the daughter-in-law of G who has only one child.

III. H is not married to F. I has only one daughter. G is not a female. B is the child of H.

- (A) All the statements I, II, and III together are sufficient
- (B) Statement II and Statement III together are sufficient
- (C) Statement I and Statement III together are sufficient
- (D) Statement I and Statement II together are sufficient
- (E) Either two of the given statements are sufficient

Q3 The questions below consist of three statements numbered I, II, and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and answer the question.



A, B, C, D and E are five friends who live on a different floor of a 9-floor building such that the ground floor of the building is marked as 1 and above it is marked as 2 and so on till the topmost floor which is marked as 9. Other floors are vacant.

D lives on which floor, if B doesn't live on 3rd or 5th floor?

I. E lives on an odd-numbered floor. D neither lives immediately above E nor immediately below A.

II. Two persons live between A and C. B lives below C. A lives on an odd number floor.

III. C lives on the even number floor below A. B does not live on the 1st or 4th floor.

(A) Statement I and Statement II together are sufficient

(B) Statement II and Statement III together are sufficient

(C) Statement I and Statement III together are sufficient

(D) All the statements I, II, and III together are sufficient

(E) Either two of the given statements are sufficient

Q4 Three statements numbered I, II & III given below. You have to decide whether the data provided in the statements are sufficient to answer the question.

Five friends A, B, C, D & E have to go to the party on 14 May, 15 May & 16 May (not necessarily in the same order). They have different professions: Doctor, Actor, CA, Engineer & Teacher. No two friends have the same profession. Not more than 2 people go to the same party. One person goes to only one party.

On 16th May____&____goes to a party (names of people).

I. A goes to a party with Actor. D is not a CA. Teacher goes to party with E. C is not a teacher. D doesn't have to go on 15th May.

II. Neither C nor B goes to party with D. D doesn't go to party with A. C doesn't to party with B. D is not a teacher.

III. A doesn't go to party with B. E is not an engineer. C is not a CA but goes with A. E doesn't go on 14th May.

(A) If the data in statement I and II together is sufficient to answer the question, and the data in statement III is not required to answer the question

(B) If the data in statement II and III is sufficient to answer the question, and the data in statement I is not required to answer the question

(C) If the data in statement II and III is sufficient to answer the question, and the data in statement I is not required to answer the question

(D) If the data in all three statements together is needed to answer the question

(E) If the data in all three statements together are not sufficient to answer the question

Q5 Three statements numbered I, II & III given below. You have to decide whether the data provided in the statements are sufficient to answer the question.

Seven girls of a class D, E, G, P, M, R and L are standing in a queue. Each of them got a different rank in the classroom 1st, 2nd, 3rd, 4th, 5th, 6th & 7th rank.

Who is standing in the middle of the queue?



I. D is first in the class and she is standing two places ahead of P. P is not the last person in the queue.

II. R and L are standing adjacent to each other and their ranks are also numerically adjacent to each other.

III. E who got 3rd rank in the class is standing behind only M.

- (A) All I, II and III
- (B) Both I and III
- (C) III and either I or II
- (D) Both II and III
- (E) Only III

Q6 Three statements numbered I, II and III given below. You have to decide whether the data provided in the statements are sufficient to answer the questions.

In certain code word “how was your day” is coded as ‘534 544 554 564’ then what does ‘554’ means?

I. “walk every day healthy” means ‘584 594 564 524’ and “your dream true one day” means ‘554 514 504 574 564’.

II. “Dream your day nice” means ‘514 554 564 655’ and “have nice dream” means ‘635 655 614’

III. “how joyful day was” means ‘534 645 564 544’.

- (A) Only I
- (B) Only II
- (C) Either I or II alone
- (D) Either I or III alone
- (E) All I, II and III

Q7 Study the following information carefully and answer the questions given below:

You have to consider the information in all the three statements and decide which information in the statement(s) is sufficient to answer the

question. Indicate your answer accordingly.

There are 13 members in a family. Each of them is related to other in some way.

How is K related to M?

I. A is married to B, who is daughter of P. F is niece of A. S is daughter of B and sister of K. X is brother of B and is son of H. P is sister of O. N is son of A and brother of K. B is sister-in-law of M. A is brother-in-law of T. Z is daughter of X.

II. A has only one son, who is married to R, who has 2 sons. H is the paternal aunt of M, who is the brother of N. K is not married to R. U is not married to A. S is the niece of U.

III. U is the only brother-in-law of Z’s mother. K is the paternal grandfather of R’s son. I is sister of R. T is father of S and P, who is brother of S. K is son of J.

- (A) The data in statement I alone is sufficient to answer the question
- (B) The data in statement II alone is sufficient to answer the question
- (C) The data in either statement I or statement II is sufficient to answer the question
- (D) The data in statement II and statement III together sufficient to answer the question
- (E) The data in statement III alone is sufficient to answer the question

Q8 Directions: A problem consists of a question and three statements numbered I, II and III. You have to decide whether the data given in the statements are sufficient to answer the question.

Ajay planted different plants viz. Fern, Jade, Lily, Palm, Spider and Vine in different pots - P, Q, R, S, T and U on different days of a week starting on a Monday, where days of planting were consecutive. No plant was planted after Spider, which was planted immediately after the plant



planted in pot U. Which plant did he plant in the pot S?

Statement I: Three plants were planted in between the plants planted in pots Q and U. Lily was planted in pot P but not on Thursday. Plant in pot S was planted before the plant in pot R.

Statement II: Palm was planted immediately before Vine. Jade was not planted in either S or R. Jade plant was planted immediately after the plant in pot Q.

Statement III: Lily was planted immediately after Jade. Plants in pots T and S were planted on the adjacent days to the day on which Lily was planted.

- (A) If the data in statement III alone are sufficient while, the data in either statement I or statement II alone are not sufficient to answer the question
- (B) If the data in statement II alone are sufficient while, the data in either statement I or statement III alone are not sufficient to answer the question
- (C) If the data in statements I and II together are sufficient to answer the question
- (D) If the data in statement I alone are sufficient while, the data in either statement II or statement III alone are not sufficient to answer the question
- (E) If the data in statements II and either III or I together are sufficient to answer the question

Q9 A question and three statements numbered I, II and III are given below. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and give the answer.

Seven family members - Arjun, Samay, Kavish, Milan, Revan, Nitin and Viraj visit the temple from

Monday to Sunday. Who among the following visits on Monday?

Statement I:- Milan visits the temple before Samay. Only one person visits the temple between Milan and Samay. Milan does not visit temple after Wednesday. Three persons visit the temple between Kavish and Revan, who visits before Kavish.

Statement II:- Three persons visit between Nitin and Samay. The number of persons visit before and after Milan is the same. Only one person visits between Nitin and Milan, who visits after Nitin. Viraj does not visit to temple on Sunday.

Statement III:- Three persons visit the temple between Arjun and Viraj, who visits after Arjun. The number of persons visit temple after Samay is same as the number of persons visit temple before Nitin.

- (A) Only Statement I is sufficient to answer the question.
- (B) Only Statement II is sufficient to answer the question.
- (C) Only Statement III is sufficient to answer the question.
- (D) Both II and III are sufficient to answer the question.
- (E) All three statements are not sufficient to answer the question.

Q10 A question and three statements numbered I, II and III are given below. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and give the answer.

Which of the following statements shows that "Some Educated are boys"?

I: 'No married are unhappy' and 'Only a few Boys are bachelors' and 'All Smart are educated'

II: 'All Boys are smart' and 'No Educated are



unemployed' and 'All married are bachelors'.

III: 'Some boys are married' and 'No unhappy are married' and 'All Bachelors are educated'.

- (A) The data in statement II and either I or III are sufficient to answer the question.
- (B) The data in any two of the three statements together are sufficient to answer the question.
- (C) The data in statement III and either I or II are sufficient to answer the question.
- (D) The data in statement I and either II or III are sufficient to answer the question
- (E) The data in statement I alone or statement II alone or statement III alone is necessary to answer the question.

Q11 In each of the following questions, a few statements have been given. Analyse the given statements and answer whether the data given in the statements are sufficient to answer the question or not.

Five boxes of different colors – red, black, green, yellow and pink – are placed one above another on different shelves but not necessarily in the same order. The bottommost shelf is numbered as 1 and the topmost shelf is numbered as 5. Which box is placed immediately below the red box?

Statements:

I: One box is placed between black box and red box, which is placed immediately below yellow box. Two boxes are placed between pink box and green box.

II: Black box is placed immediately below pink box and neither of the boxes is placed adjacent to green box. One box is placed between green box and red box.

III: Two boxes are placed between yellow box and black box. Red box is placed at the prime numbered shelf and two boxes below the green box.

- (A) Only statement II alone is sufficient to answer the question whereas both statements I and III are not sufficient to answer the question.
- (B) Both statements I and II together are sufficient to answer the question whereas statement III alone is not sufficient to answer the question.
- (C) Both statements I and III together are sufficient to answer the question whereas statement II alone is not sufficient to answer the question.
- (D) Any two of the given statements are sufficient to answer the question.
- (E) All the three statements together are necessary to answer the question.

Q12 In the following questions, a question is followed by some information in three statements. You have to decide which statement(s) data is sufficient to answer the question and mark your answer accordingly.

By which of the following statements, the conclusion - Some TV is Car which is not a Table, is definitely followed?

I. Some Bed is TV, All TV is Car; No Table is a Bag, Some Park is TV.

II. Some Cars are Bags, No Park is a Car, All Bags are TV, No Bag is Table.

III. No Table is a Park, Some Park is Bag, No TV is Car, All TV is Bed.

- (A) Only II is sufficient
- (B) Only II or both I and III is sufficient
- (C) Any one of them is sufficient
- (D) All three together will be needed



(E) None is sufficient



Answer Key

Q1 (C)

Q2 (A)

Q3 (D)

Q4 (D)

Q5 (A)

Q6 (D)

Q7 (D)

Q8 (C)

Q9 (D)

Q10 (B)

Q11 (D)

Q12 (A)



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Hints & Solutions

Q1 Text Solution:

None of the statements alone is sufficient to answer the question.

Using the statements, I and III together we get;

As P is taller than at least three persons but P is shorter than T, who is just taller than Q.

$T > Q > P (170\text{cm}) > S > U > R$

or

$T > Q > P (170\text{cm}) > S > R > U$

or

$T > Q > P (170\text{cm}) > U > S > R$

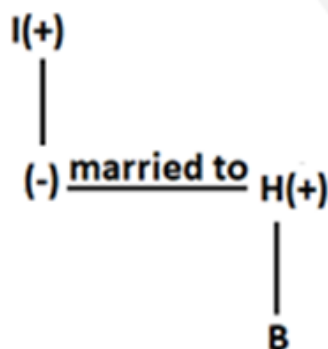
Q is the second tallest person.

Hence, option (c) is the correct answer.

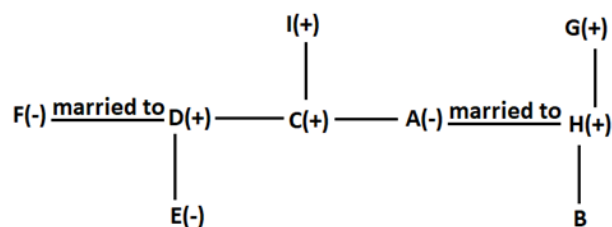
Q2 Text Solution:

From statement I alone, as C is the unmarried brother of A. F is the sister-in-law of A. There are two married couples in the family, so there is lack of proper information.

From statement II alone, as I is the father-in-law of H, who is the father of B. E is the daughter of F. A is the daughter-in-law of G, who has only one child, so



Using all the statements I, II, and III we get the following blood relation:



Clearly, H is the brother-in-law of D.

Hence, option (a) is the correct answer.

Q3 Text Solution:

None of the statements alone is sufficient to answer the question.

Using all the statements I, II and III together.

Clues:

- Two persons live between A and C.
- C lives on the even number floor below A.
- A lives on an odd number floor.
- B lives below C.
- B does not live on the 1st or 4th floor.

Inference: From clues 1, 2, 3, 4, and 5 we conclude that there are possible ways to arrange A, B, and C.



Floor	Case 1	Case 2	Case 3
9	A	A	
8			
7			A
6	C		
5			
4		C	C
3			
2	B	B	B
1			

Clues:

1. E lives on an odd-numbered floor.
2. D neither lives immediately above E nor immediately below A.

Inference: From clues 1, and 2 we conclude that D lives on the 7th floor. E lives on the 5th floor.

Floor	Case 2
9	A
8	
7	D
6	
5	E
4	C
3	
2	B
1	

All the statements I, II and III together are sufficient.

Hence, option (d) is the correct answer.

Q4 Text Solution:

From I, II & III:

14 May	A	C (Actor)
15 May	D	
16 May	E	B (Teacher)

So, all statements together are sufficient to answer the Question.

Q5 Text Solution:

Combining any two of the statements would not give us any concrete order.

On combining all three statements,

Since P is not the last person in the queue, we have the below order.



M, E (3), D (1), G, P, R/L, L/R

The person in the 4th position must be G.

Hence, all statements are required to answer the question.

Q6 Text Solution:

From I:

how was your day → 534 544 554 564 --- (1)

walk every day healthy → 584 594 564 524 --- (2)

your dream true one day → 554 504 574 564 554 --- (3)

From (1), (2) and (3)

Day → 554 --- (4)

From (1), and (3), and using (4) we get,
your → 554

Hence Statement I alone is sufficient.

From II:

how was your day → 534 544 554 564

Dream your day nice → 514 554 564 655

have nice dream → 635 655 614

your day → 564 554

From III:

how was your day → 534 554 564

how joyful day was → 534 645 564 544

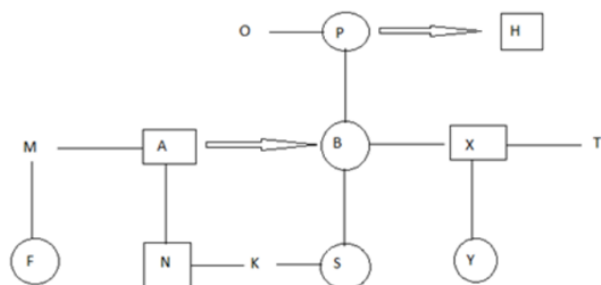
So, how day was → 544 564 534

Hence, Your - 554

Hence, statement III alone is sufficient.

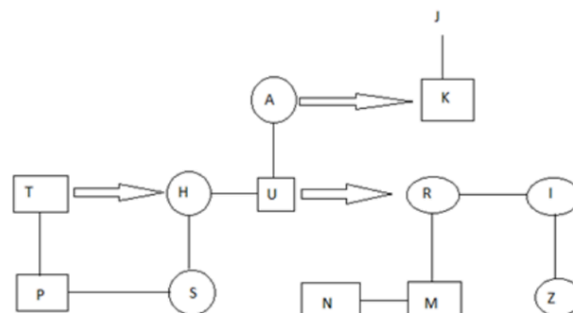
Q7 Text Solution:

From Statement-I:



Statement I is not sufficient to answer the question.

From statement-II and III together:



Hence, option (d) is the correct answer.

Q8 Text Solution:

It is given that,

Ajay planted different plants viz. Fern, Jade, Lily, Palm, Spider and Vine in different pots - P, Q, R, S, T and U on different days of a week starting on a Monday, where days of planting were consecutive.

No plant was planted after Spider, which was planted immediately after the plant planted in pot U.

We get,

Day	Pot	Plant
Monday		
Tuesday		
Wednesday		
Thursday		
Friday	U	
Saturday		Spider

From statement I,

Three plants were planted in between the plants planted in pots Q and U. Lily was planted in pot P but not on Thursday. Plant in pot S was planted before the plant in pot R.

We get,



Day	Pot	Plant
Monday	Q	
Tuesday		
Wednesday		
Thursday		
Friday	U	
Saturday		Spider

We do not have any further information.

Hence, statement I alone is not sufficient.

From statement II,

Palm was planted immediately before Vine. Jade was not planted in either S or R. Jade plant was planted immediately after the plant in pot Q.

We get,

Day	Pot	Plant
Monday		
Tuesday		
Wednesday		
Thursday		
Friday	U	
Saturday		Spider

We do not have any further information.

Hence, statement II alone is not sufficient.

From statement III,

Lily was planted immediately after Jade. Plants in pots T and S were planted on the adjacent days to the day on which Lily was planted.

We get,

Day	Pot	Plant
Monday		
Tuesday		
Wednesday		
Thursday		
Friday	U	
Saturday		Spider

We do not have any further information.

Hence, statement III alone is not sufficient.

From statements I and II,

Three plants were planted in between the plants planted in pots Q and U. Lily was planted in pot P but not on Thursday. Plant in pot S was planted before the plant in pot R.

Palm was planted immediately before Vine. Jade was not planted in either S or R. Jade plant was planted immediately after the plant in pot Q.

We get,

Day	Pot	Plant
Monday	Q	Fern
Tuesday	T	Jade
Wednesday	P	Lily
Thursday	S	Palm
Friday	U	Vine
Saturday	R	Spider

Here, palm plant was planted in the pot S.

Hence, statements I and II together are sufficient.

From statements II and III,

Palm was planted immediately before Vine. Jade was not planted in either S or R. Jade plant was planted immediately after the plant in pot Q.

Lily was planted immediately after Jade. Plants in pots T and S were planted on the adjacent days to the day on which Lily was planted.

We get,

Case 1

Day	Pot	Plant
Monday	Q	Fern
Tuesday	T	Jade
Wednesday	P/R	Lily
Thursday	S	Palm
Friday	U	Vine
Saturday	P/R	Spider

Case 2



Day	Pot	Plant
Monday		
Tuesday		
Wednesday	Q	
Thursday	T	Jade
Friday	U	Lily
Saturday	S	Spider

S can be Palm/Spider

Hence, statements III and II together are not sufficient.

From statements I and III,

Three plants were planted in between the plants planted in pots Q and U. Lily was planted in pot P but not on Thursday. Plant in pot S was planted before the plant in pot R.

Lily was planted immediately after Jade. Plants in pots T and S were planted on the adjacent days to the day on which Lily was planted.

We get,

Day	Pot	Plant
Monday	Q	
Tuesday	T/S	Jade
Wednesday	P	Lily
Thursday	T/S	
Friday	U	
Saturday	R	Spider

We do not have any further information.

Hence, statements I and III together are not sufficient.

Q9 Text Solution:

From statement I-

Statement I:- Milan visits the temple before Samay. Only one person visits the temple between Milan and Samay. Milan does not visit temple after Wednesday. Three persons visit the

temple between Kavish and Revan, who visits before Kavish. Neither Milan nor Revan visits temple Tuesday.

Day	Person	Person	Person
Monday	Revan	Milan	
Tuesday	Milan	Revan	Milan
Wednesday		Samay	Revan
Thursday	Samay		Samay
Friday	Kavish		
Saturday		Kavish	
Sunday			Kavish

So, statement I alone is not sufficient.

From statement II-

Statement II:- Three persons visit between Nitin and Samay. The number of persons visit before and after Milan is the same. Only one person visits between Nitin and Milan, who visits after Nitin. Viraj does not visit to temple on Sunday.

Day	Person
Monday	
Tuesday	Nitin
Wednesday	
Thursday	Milan
Friday	
Saturday	Samay
Sunday	

So, statement II alone is not sufficient.

From statement III-

Statement III:- Three persons visit the temple between Arjun and Viraj, who visits after Arjun. The number of persons visit temple after Samay is same as the number of persons visit temple before Nitin. Arjun does not visits on Tuesday.

Day	Person	Person
Monday	Arjun	
Tuesday		
Wednesday		Arjun



Thursday		
Friday	Viraj	
Saturday		
Sunday		Viraj

So, statement III alone is not sufficient.

Combining statements II and III:-

Statement II:- Three persons visit between Nitin and Samay. The number of persons visit before and after Milan is the same. Only one person visits between Nitin and Milan, who visits after Nitin. Viraj does not visit to temple on Sunday.

Statement III:- Three persons visit the temple between Arjun and Viraj, who visits after Arjun. The number of persons visit temple after Samay is same as the number of persons visit temple before Nitin. Arjun does not visits on Tuesday.

Day	Person
Monday	Arjun
Tuesday	Nitin
Wednesday	
Thursday	Milan
Friday	Viraj
Saturday	Samay
Sunday	

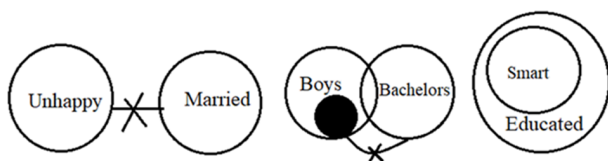
Arjun visits the temple on Monday.

Hence, Both Statements II and III are sufficient to answer the question.

Q10 Text Solution:

From statement I -

Statement I: 'No married are unhappy' and 'Only a few Boys are bachelors' and 'All Smart are educated'

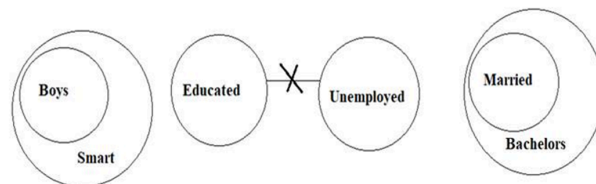


There is no relation between Boys and Educated.

So, statement I alone is not sufficient.

From statement II -

Statement II: 'All Boys are smart' and 'No Educated are unemployed' and 'All married are bachelors'.

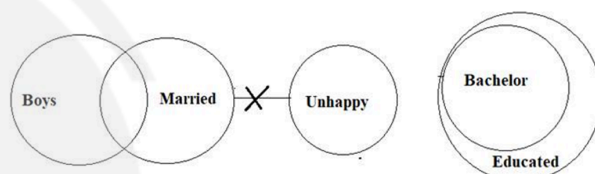


There is no relation between Boys and Educated.

So, statement II alone is not sufficient.

From statement III -

Statement III: 'Some boys are married' and 'No unhappy are married' and 'All Bachelors are educated'.



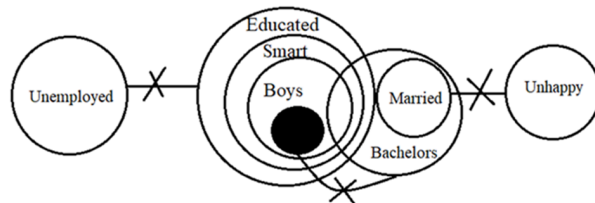
There is no relation between Boys and Educated.

So, statement III alone is not sufficient.

Combining I and II:-

Statement I: 'No married are unhappy' and 'Only a few Boys are bachelors' and 'All Smart are educated'

Statement II: 'All Boys are smart' and 'No Educated are unemployed' and 'All married are bachelors'.



Here, it shows that "Some Educated are boys"

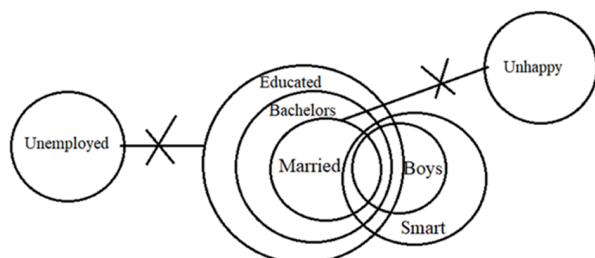
Thus, statements I and II are sufficient.

Combining II and III:-



Statement II: 'All Boys are smart' and 'No Educated are unemployed' and 'All married are bachelors'.

Statement III: 'Some boys are married' and 'No unhappy are married' and 'All Bachelors are educated'.



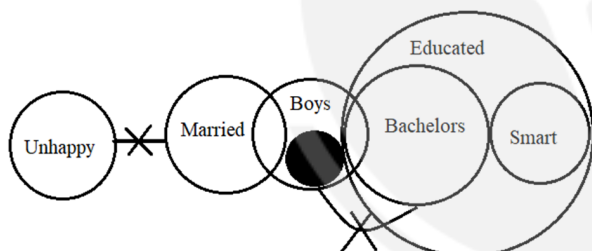
Here, it shows that "Some Educated are boys"

Thus, statements II and III are sufficient.

Combining I and III:-

Statement I: 'No married are unhappy' and 'Only a few Boys are bachelors' and 'All Smart are educated'

Statement III: 'Some boys are married' and 'No unhappy are married' and 'All Bachelors are educated'.



Thus, as only a few boys are bachelors and all bachelors are educated

Then, Some educated must be boys.

Thus, it shows "Some Educated are boys".

So, statements I and III are sufficient.

Hence, the data in any two of the three statements together are sufficient to answer the question.

Q11 Text Solution:

On combining any two of the given statements, we have

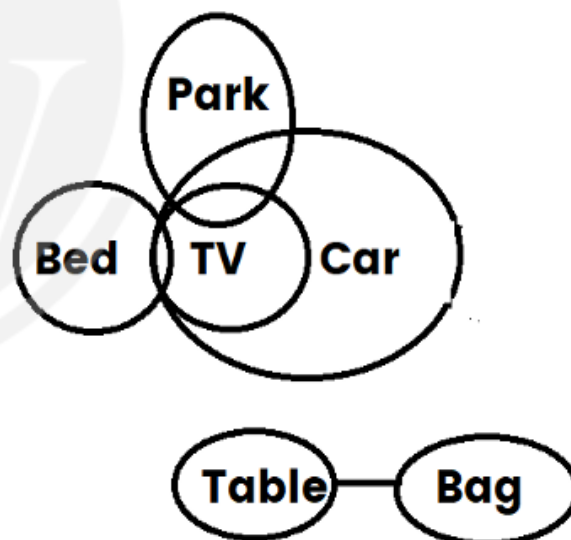
Shelves	Boxes
5	Green
4	Yellow
3	Red
2	Pink
1	Black

Hence, Any two of the given statements are sufficient to answer the question

Q12 Text Solution:

From I:

Some Bed is TV, All TV is Car; No Table is a Bag, Some Park is TV.

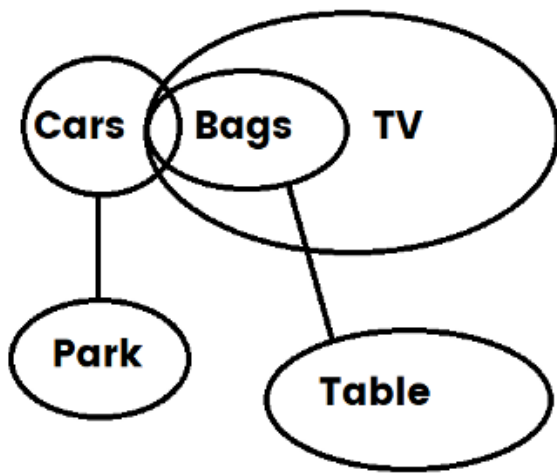


(No definite information is available)

From II:

Some Cars are Bags, No Park is a Car, All Bags are TV, No Bag is Table.

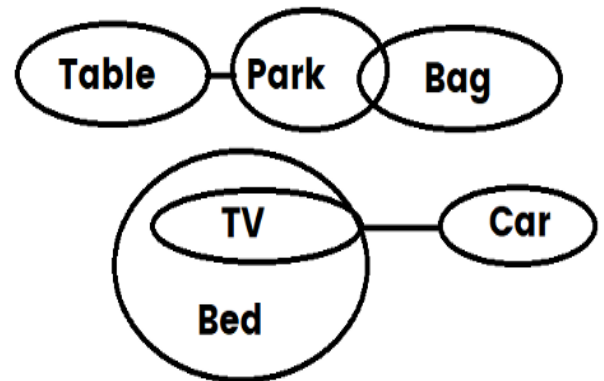




From III:

No Table is a Park, Some Park is Bag, No TV is Car,
All TV is Bed.

(Here no TV is Car, so it will not follow)



Therefore, we can see that, the given conclusion is only followed by II.



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