

# Data sufficiency and Logical Reasoning Test for KMAT



<https://www.entri.me>



<https://play.google.com/store/apps/details?id=me.entri.entri.me>

**In the question, three statements are given followed by three conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and decide which of the given conclusions logically do not follow from the given statements disregarding the commonly known facts.**

**1. Statements:**

**Some work is not effort**

**All work is efficiency**

**Only a few act is effort**

**Conclusions:**

**I. Some act is not work**

**II. Some efficiency is act**

**III. All efficiency is effort**

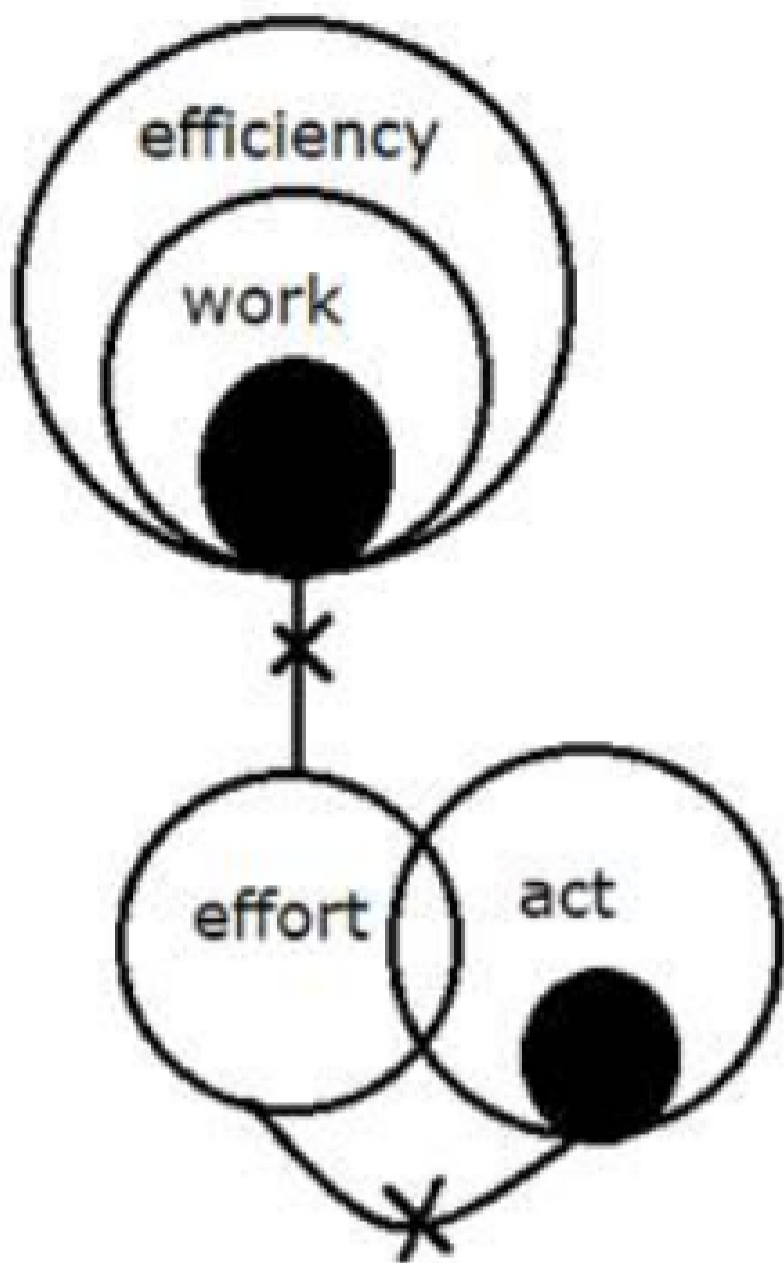
**A** Both I and III

**B** Both I and II

**C** Only I

**D** All I, II and III

## Solution



Some act is not work: Here, the definite relation between act and work cannot be established. So, conclusion I is false.

Some efficiency is act: Here, there is a possibility that some efficiency is act So, conclusion II is false.

All efficiency is effort: Here, some efficiency is definitely not effort. So, conclusion III is false.

**In the question, three statements are given followed by three conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and decide which of the given conclusions logically do not follow from the given statements disregarding the commonly known facts.**

**2. Statements:**

**Only a few deal is pact**

**All treaty is trade**

**Every trade is deal**

**Conclusions:**

**I. Some treaty is pact**

**II. Very few deal is treaty**

**III. No trade is pact**

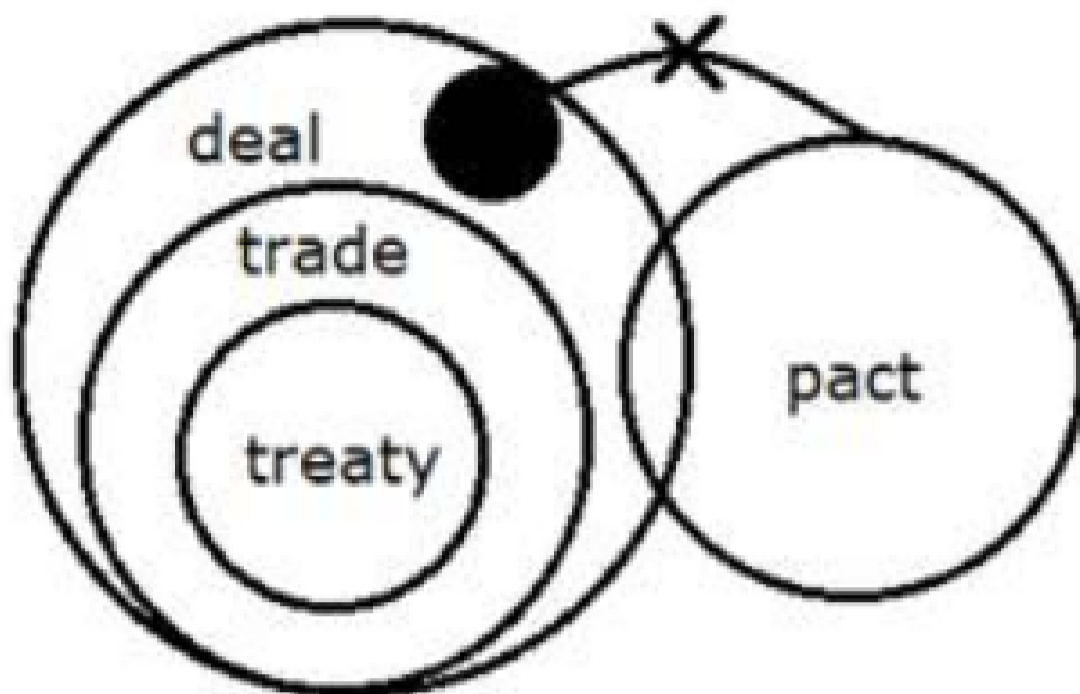
**A Both I and III**

**B Only III**

**C Only I**

**D Only II**

## Solution



Some treaty is pact: Here, all treaty is deal and some deal is pact. Thus, there is a possibility that some treaty is pact. So, conclusion I is false.

Very few deal is treaty: Here, some deal is definitely treaty. So, conclusion II is true.

No trade is pact: Here, there is a possibility that some trade is pact. So, conclusion III is false.

**In the question below, two statements (I) and (II) are given. These statements may be either independent causes or may be effects of independent causes or a common cause. One of these statements may be the effect of the other statement. Read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.**

- 3. Statement I. The road that we had to travel was so rough that it took 3 hours extra to reach our destination.**

**Statement II. The pathway became slippery as the container that carried cooking oil met with an accident.**

**A** Statement I is the cause and Statement II is the effect.

**B** Both statement I and II are independent causes.

**C** Statement II is the cause and Statement I is the effect.

**D** Both statement I and II are effects of independent causes.

### **Solution**

Statement I talks about the delay in a travel that has happened due to the irregular and bumpy nature of the road and statement II talks about the slippery condition of a road due to the accident caused to a container that carried oil. These two events though happen on road they are independent

of each other and are also not the effect of some common reason. So, the correct relation between the two given statements is option (d) 'Both statement I and II are effects of independent causes'.

Hence, the correct answer is option (d).

4. **Ten points of borewell are marked by the contractor on a map. The points are at a certain distance from each other. Read the following information and answer the question.**

In a certain code,

$A \leq B$  means A is to the north of B

$A \odot B$  means A is to the south of B

$A \in B$  means A is to the east of B

$A \otimes B$  means A is to the west of B

$B1 \ 4m \ \odot \ B4 \ 5m \ \otimes \ B9; \ B9 \ \odot \ 3m \ B2 \ 7m \ \otimes \ B10 \ 5m \ \leq \ B3; \ B6 \ 8m \ \odot \ B8 \ \in \ 2m \ B3 \ ; \ B6 \ 9m \ \in \ B7 \ ; \ B5 \ 2m \ \leq \ B7.$

Note:-  $B1 \ 4m \ \odot \ B4$  means B1 is 4m south of B4.

**A. Which of the following points are on the same line?**

**A** B4, B9 and B3

**B** B7, B6 and B1

**C** B2, B9 and B5

**D** B8, B3 and B10

**Solution**



B1 4m © B4 means B1 is 4m to the south of B4.

B4 5m ® B9 means B4 is 5m to the west of B9.

B9 3m © B2 means B9 is 3m to the south of B2.

B2 7m ® B10 means B2 is 7m to the west of B10.

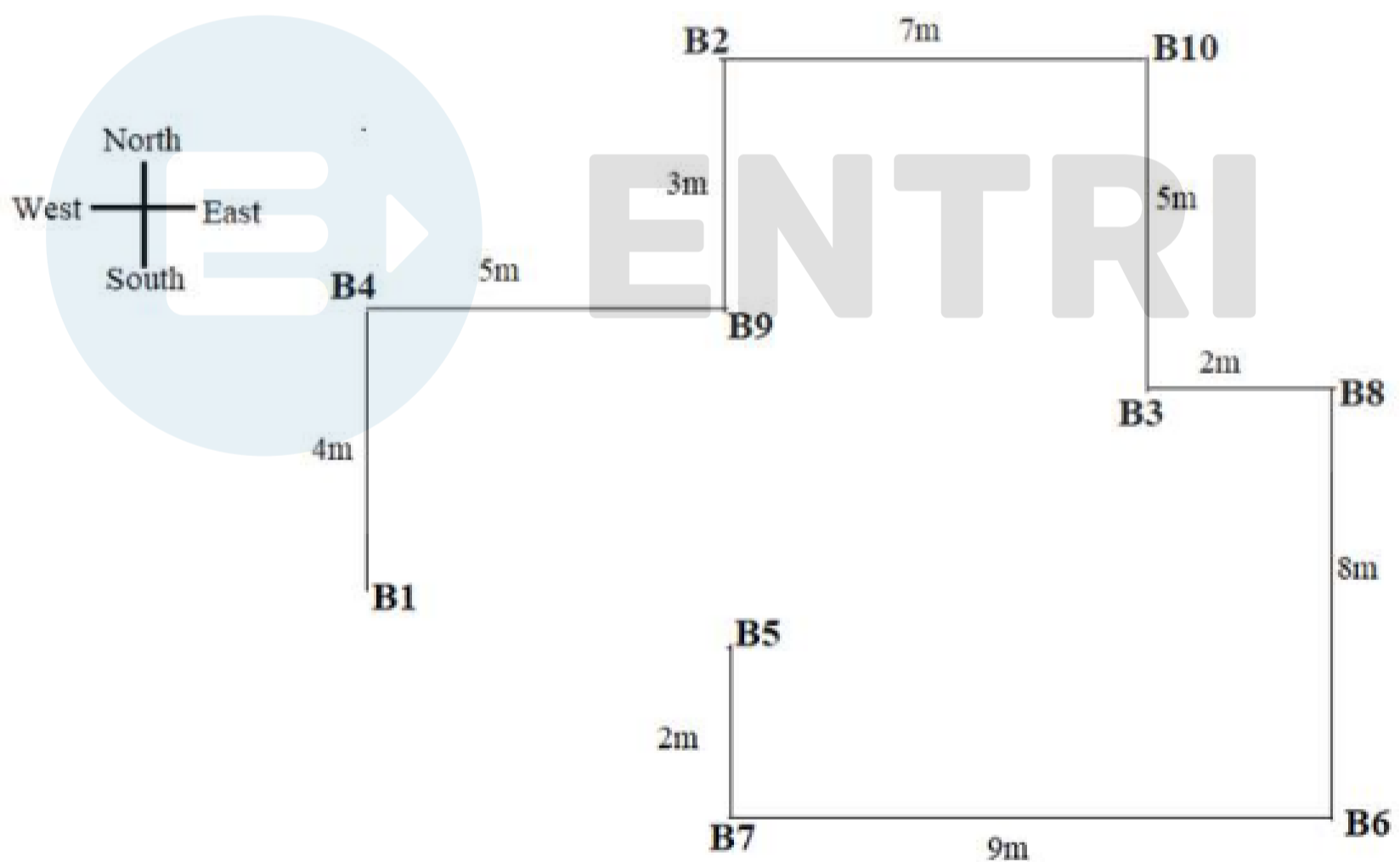
B10 5m ≤ B3 means B10 is 5m to the north of B3.

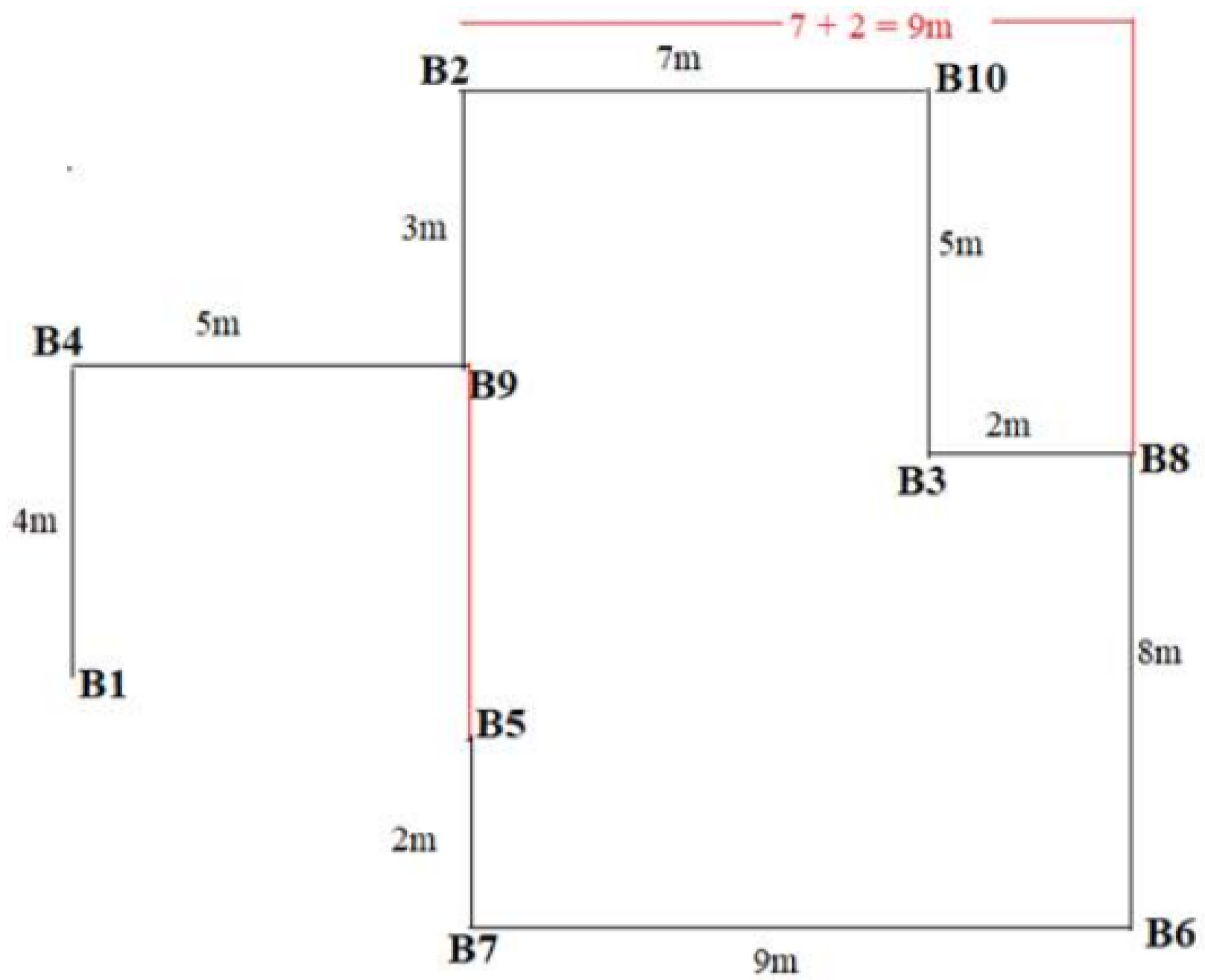
B6 8m © B8 means B6 is 8m to the south of B8.

B8 2m € B3 means B8 is 2m to the east of B3.

B6 9m € B7 means B6 is 9m to the east of B7.

B5 2m ≤ B7 means B5 is 2m to the north of B7.





Points B2, B9 and B5 are on the same line.

**B. What is the direction of point B5 with respect to point B10?**

A Northeast

B Southwest

C North

D Southeast

### Solution

B1 4m © B4 means B1 is 4m to the south of B4.

B4 5m ® B9 means B4 is 5m to the west of B9.

B9 3m © B2 means B9 is 3m to the south of B2.

B2 7m ® B10 means B2 is 7m to the west of B10.

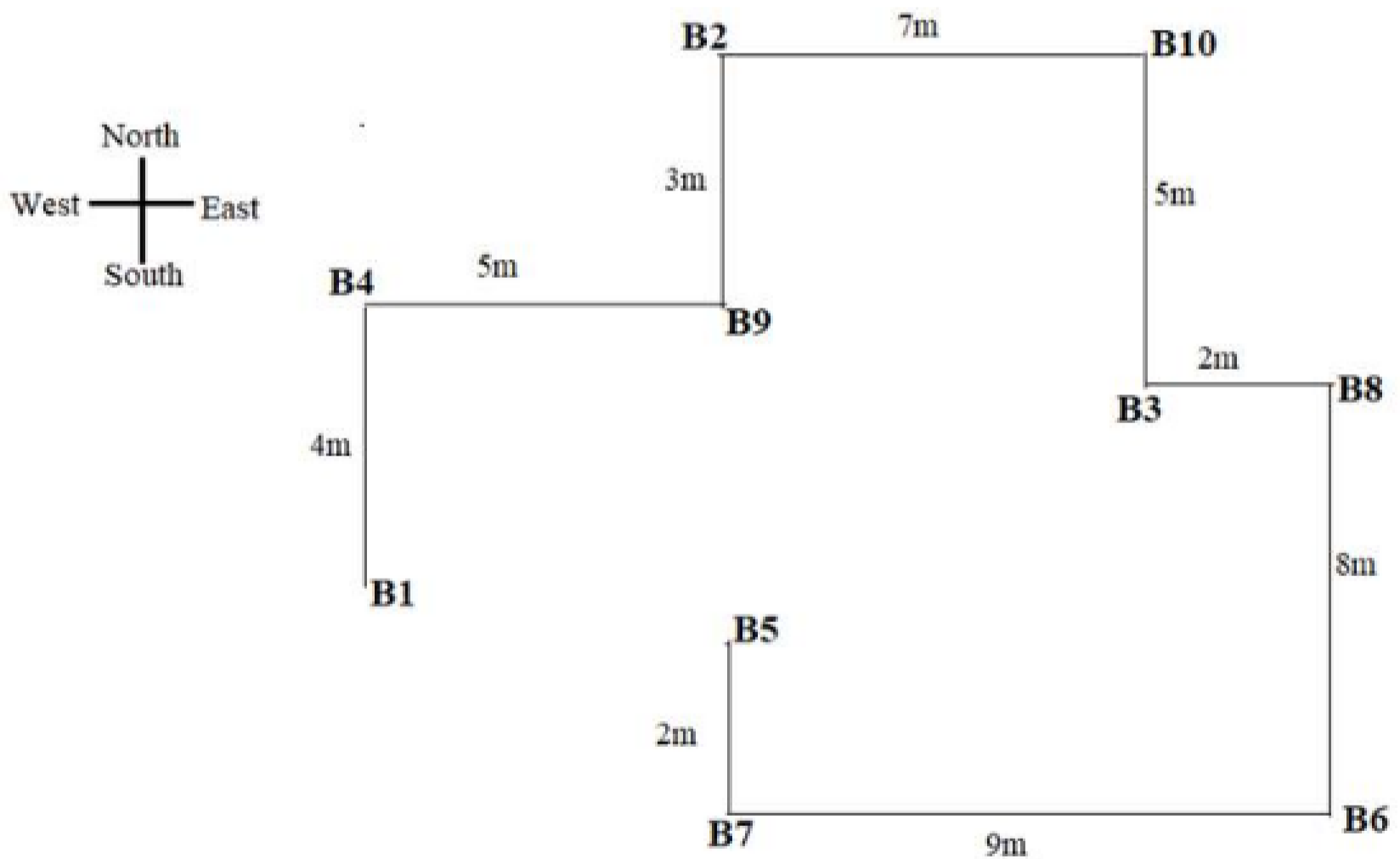
B10 5m ≤ B3 means B10 is 5m to the north of B3.

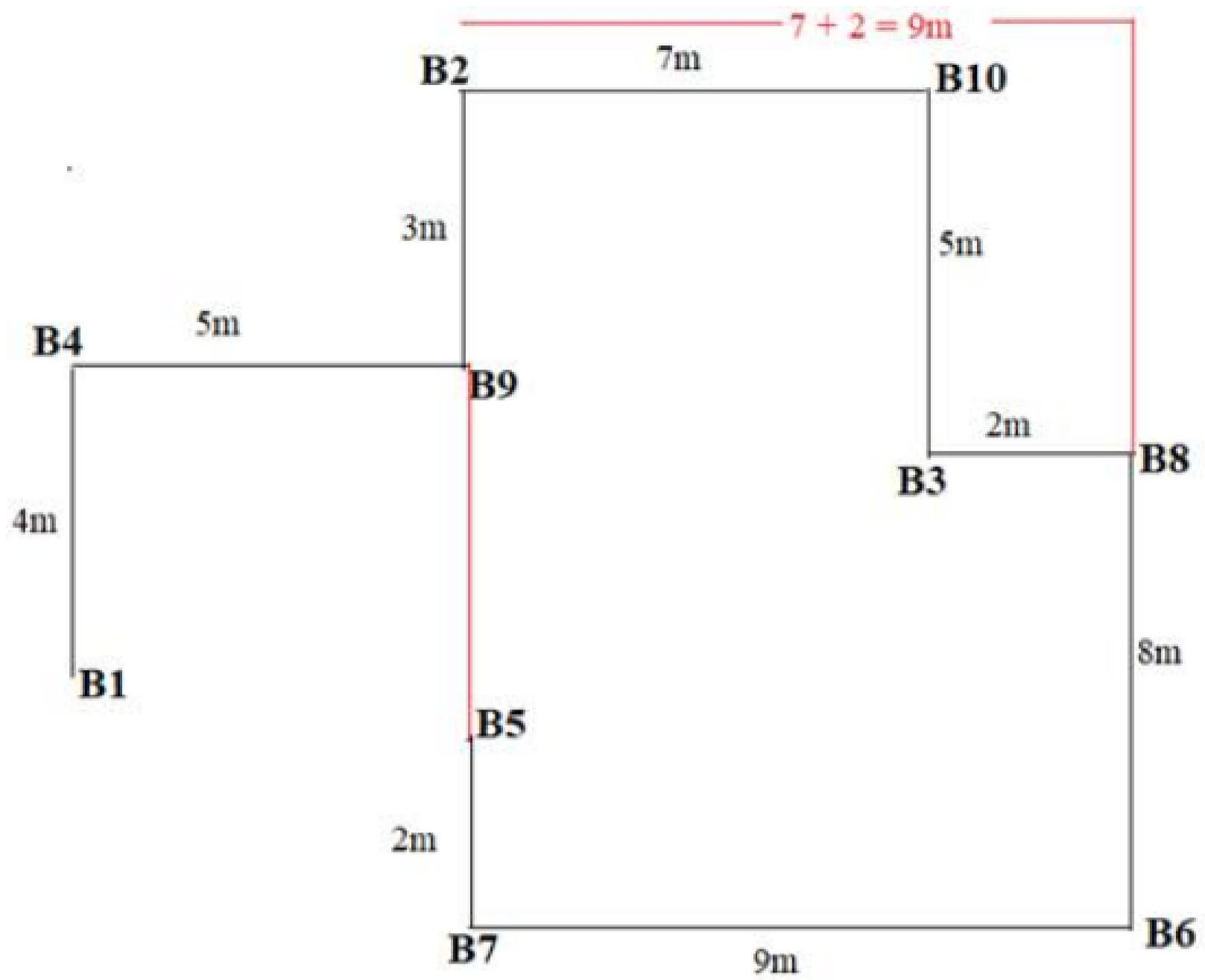
B6 8m © B8 means B6 is 8m to the south of B8.

B8 2m € B3 means B8 is 2m to the east of B3.

B6 9m € B7 means B6 is 9m to the east of B7.

B5 2m ≤ B7 means B5 is 2m to the north of B7.





Point B5 is southwest of point B10.

C. What is the shortest distance between point B2 and point B4?

A  $\sqrt{19}m$

B 25m

C 18m

D  $\sqrt{34}m$

### Solution

B1 4m © B4 means B1 is 4m to the south of B4.

B4 5m ® B9 means B4 is 5m to the west of B9.

B9 3m © B2 means B9 is 3m to the south of B2.

B2 7m ® B10 means B2 is 7m to the west of B10.

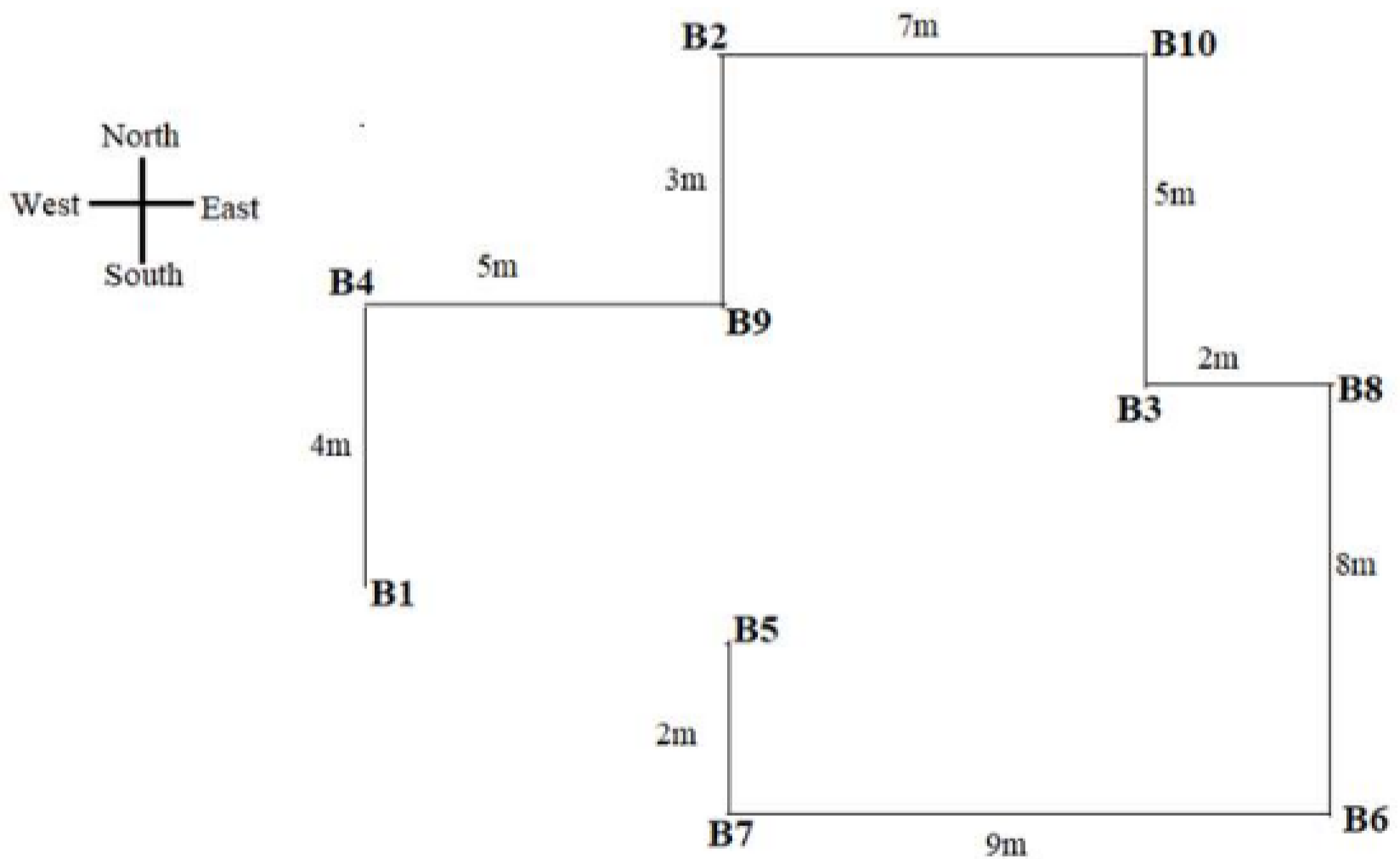
B10 5m ≤ B3 means B10 is 5m to the north of B3.

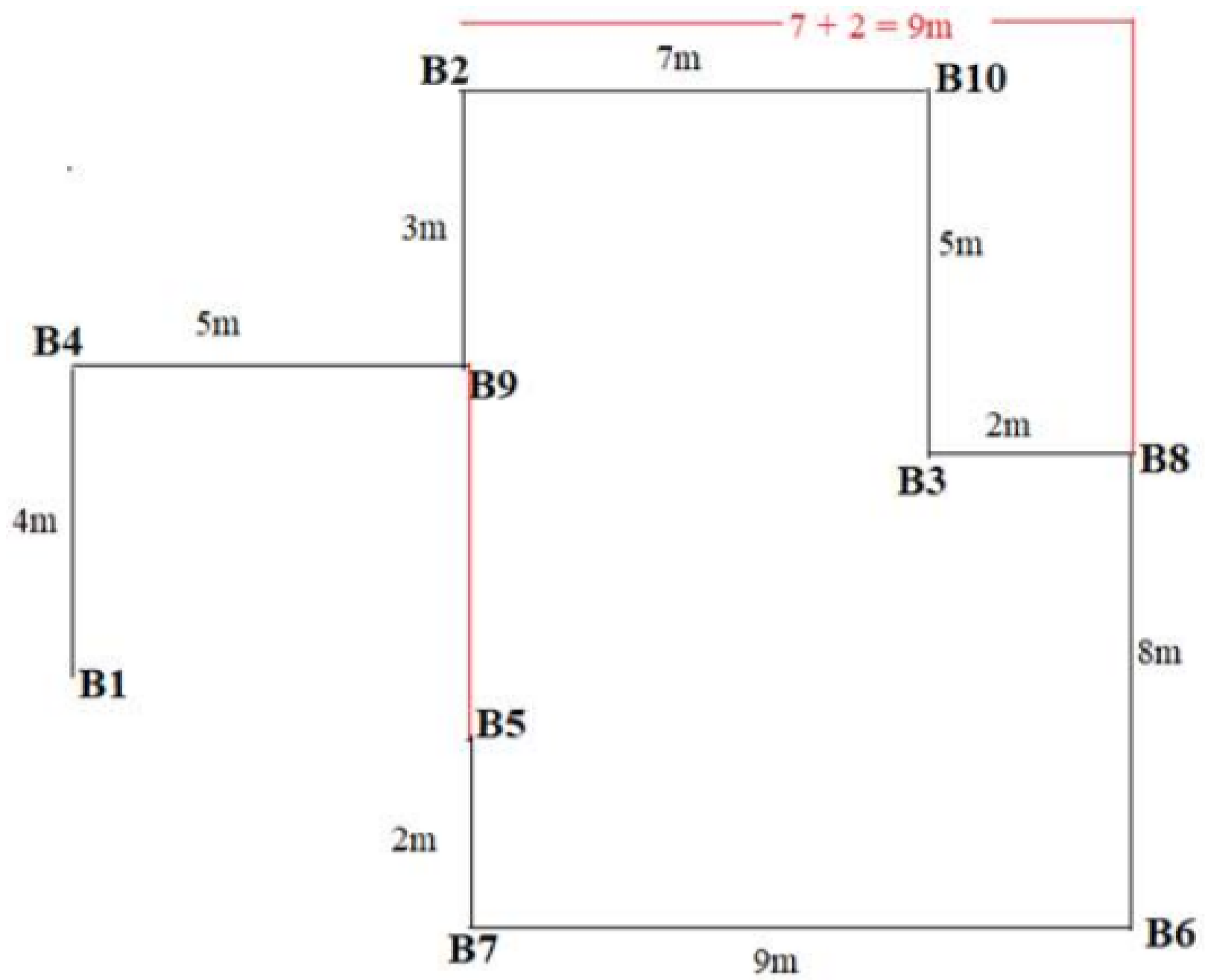
B6 8m © B8 means B6 is 8m to the south of B8.

B8 2m € B3 means B8 is 2m to the east of B3.

B6 9m € B7 means B6 is 9m to the east of B7.

B5 2m ≤ B7 means B5 is 2m to the north of B7.





By Pythagoras theorem -

$$PR^2 = PQ^2 + QR^2$$

$$PR^2 = 3^2 + 5^2$$

$$PR^2 = 9 + 25$$

$$PR = \sqrt{34}m$$

The shortest distance between point B2 and point B4 is  $\sqrt{34}m$ .

**In the question given below, three statements are given followed by five conclusions given in options. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and decide which of the given conclusions logically follows from the given statements disregarding the commonly known facts.**

**5. Statements:**

**Only a few 2021 are 2022**

**No 2023 is 2022**

**At least 2012 is 2021**

**A** Some 2012 are 2023

**B** No 2021 is 2023

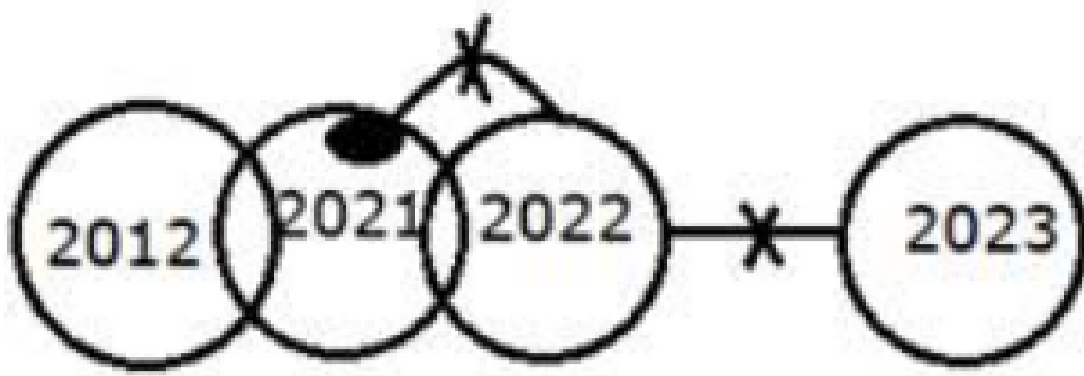
**C** Some 2012 can be 2022

**D** All 2021 are 2022

**Solution**

The statements are:

Only a few 2021 are 2022; No 2023 is 2022; At least 2012 is 2021



Here, there is a possibility that some 2012 are 2023. Thus, option (a) is false.

The 2021 which are not 2022 can be 2023. Thus, option (b) is false.

There is a possibility that some 2012 can be 2022.

Some 2021 are not 2022. Thus, option (d) is false.

So, only option (c) follows.



In the question given below, three statements are given followed by five conclusions given in options. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and decide which of the given conclusions logically follows from the given statements disregarding the commonly known facts.

6. **Statements:**

**Only a few BEFORE are PREVIOUS**

**No AFTER is PREVIOUS**

**No AMONG is BEFORE**

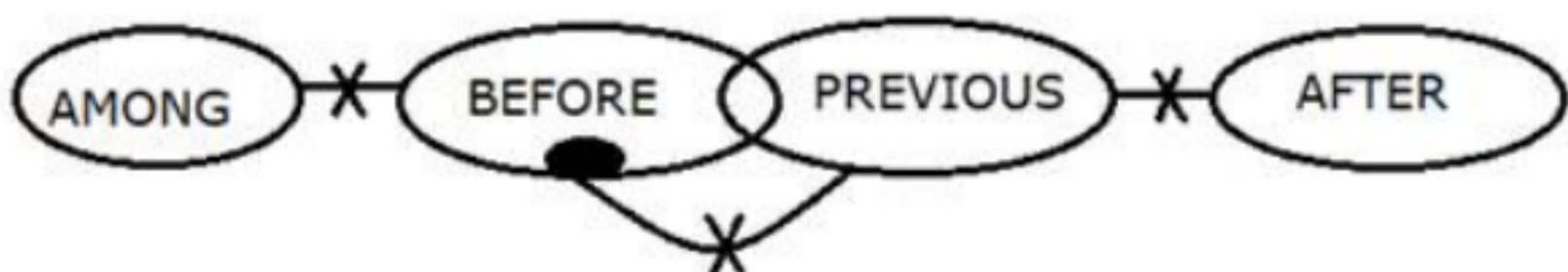
**A** Some AMONG are AFTER is a possibility

**B** Some AFTER are BEFORE is a possibility

**C** All PREVIOUS can be BEFORE

**D** All of the above

**Solution**



The statements are:

Only a few BEFORE are PREVIOUS; No AFTER is PREVIOUS; No AMONG is BEFORE

So, there is a possibility that some AMONG are AFTER.

BEFORE which are not PREVIOUS can be AFTER. So, there is a possibility that some AFTER are BEFORE.

There is a possibility that all PREVIOUS can be BEFORE.

There is a possibility that some PREVIOUS are AMONG.

So, all the above options are true.

**In the question below, two statements (I) and (II) are given. These statements may be either independent causes or may be effects of independent causes or a common cause. One of these statements may be the effect of the other statement. Read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.**

- 7. Statement I. The city has not witnessed any such a downpour alike the last week's, in at least the last few decades, which has lead to fervent power cuts and disturbed normalcy.**

**Statement II. The cattle shed has been carried away by the violent thunderstorms and the cattle have been left drenching.**

**A** Statement I is the cause and Statement II is the effect.

**B** Both statement I and II are independent causes.

**C** Statement II is the cause and Statement I is the effect.

**D** Both statement I and II are effects of a common cause.

### **Solution**

Statement I talks about a historical downpour that has disrupted the normalcy of life in a city. Statement II talks about a cattle shed that is thrown away by storms and rains. These two incidents have a common

cause that is 'heavy rainfall' and both the incidents are the effects of this common cause.

Hence, the correct answer is option (e).

**According to the British Government's own projections<sup>3</sup>, solar power is expected to become the 2nd cheapest form of electricity in the UK within the next few years. A recent report from the Department of Business, Energy and Industrial Strategy compares the costs of future energy projects and found that solar could beat conventional gas systems by large margins.**

**8. Which of the following, if true, would weaken the reliance of the British people on solar power for its affordability?**

**A**

The up-front cost of solar panels has fallen by over 30% since 2014 which has significantly reduced the upfront cost of solar for people across the UK.

**B**

Sunlight is free, so once you've paid for the panels you can start reaping the rewards with savings being up to hundreds of pounds per year.

**C**

Well-managed solar parks provide clean power and a haven for local wildlife, including endangered species of plants, insects, and birds.

**D**

**As it takes typically about 15 years to recoup your installation costs, solar panels are costly affairs and are a popular option among well-to-do families only.**

### **Solution**

The correct answer is option (d).

The given passage indicates the affordability aspect of solar energy in the United Kingdom. Option (a) and (b) highlights the cost benefits of switching to solar energy by stating the fall in the upfront cost of solar panels (which reduces the fixed costs) and savings which can be accrued based on the source of energy (sunlight) which is free. Option (c) simply depicts the aesthetic dimension of adopting solar energy which neither strengthens nor weakens the affordability aspect. Option (d) indicates the augmentation in the infrastructural capacity to harness solar energy.

Option (e) talks about the long payback period and indicates that the time period to recover the installation costs is considerable. This may, hence, be more prevalent in well-to-do families and may not be very affordable for the rest of the households. Therefore, option (e) alone weakens the given claim.

The question given below states a statement followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

9. There has been a global shortage of food supply and many countries, including India, have restricted the export of necessities including food products in light of the same.

I. In times of crisis and food shortage, one protects one's interests first.

II. India should remove all trade barriers.

**A** If only Assumption I is implicit.

**B** If only Assumption II is implicit.

**C** If either Assumption I or Assumption II is implicit.

**D** If neither Assumption I nor Assumption II is implicit.

### **Solution**

· I am correct because any action should be strategy-driven, and that strategy can be devised from the impact assessment but the action that India has already restricted the exports leads to the assumption that one will protect one's interests first.

· II is incorrect because that is a very broad assumption.

Therefore, the correct answer is option a).



he question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question:

10. Eight people went to Paris on different days of a year. The months in which they went were May, June, July and August and the dates were 16th and 18th of these months. Two people went between J and B. R went on the same date as F. P was the second person to go. How many people went between T and R?

**Statement I.** F went immediately before T but in different months. Three people went between T and S. N went in August.

**Statement II.** N went immediately after B but in different months. J and S went on same date where J went after S.

**Read both the statements and mark your answer as:**

**A**

If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question

**B**

If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question

**C**

If the data either in statement I alone or in statement II alone are sufficient to answer the question

**D**

If the data given in both statements I and II together are not sufficient to answer the question

**Solution**

Two people went between J and B. R went on the same date as F. P was the second person to go.

	MAY	JUNE	JULY	AUGUST
16				
18	P			

Considering statement I: F went immediately before T but in different months. Three people went between T and S. N went in August.

	MAY	JUNE	JULY	AUGUST
16	S	J/B	T	N
18	P	F	J/B	R

Only two people went between T and R.

Considering statement II: N went immediately after B but in different months. J and S went on same date where J went after S. Two people went between J and B. R went on the same date as F.

Case1.

	MAY	JUNE	JULY	AUGUST
16	T	S	N	J
18	P	B	R/F	R/F

Case2.

	MAY	JUNE	JULY	AUGUST
16	S	J	T	N
18	P	R/F	B	R/F

Case3.

	MAY	JUNE	JULY	AUGUST
16	S	T	N	J
18	P	B	R/F	R/F

Statement II alone is not sufficient. Thus, the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

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

**11. Who among A, B, C, D, E, F and H is the tallest?**

**Statement I. Only two person are taller to E. C is taller to E and G, who is only taller to H.**

**Statement II. B is taller to G and H but not as much as A and E. D is shorter than B and H is shortest among all.**

**Statement III. C is not the tallest and is taller to B. E is taller to B, D and G but not as much as A and C. H is shortest among all.**

**A** Only II or III

**B** Only III

**C** Only I and II

**D** All I, II & III

### **Solution**

We have:

From I:

Only two person are taller to E, that means E is third tallest among all. C is taller to E and G, who is only taller to H, that means H is shortest among all but we don't know whether C is tallest or not.

Based on above given information we have:

Height	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Name			E			G	H

Hence, statement I is not sufficient.

From II: We have:

A, E > B > G, H.

B is taller to D and H is shortest among all, that means B must be 4th tallest among all. Based on above given information we have:

Height	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Name				B			H

Hence, statement II is not sufficient.

From I and II: After combining above statements we have:

Height	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Name	A/C	C/A	E	B	D/G	G/D	H

Since, we don't know who is tallest among A and C, thus result can't be determined. Hence, statement I and II together not sufficient.

From III: We have:

- C is not the tallest and is taller than B.
- E is taller to B , D and G but not as much as A and C, that means as C is taller to B. H is shortest among all.

Height	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Name	A	C	E				H

Thus, A is tallest among all. Hence, statement III is alone sufficient.

Hence, only III is alone sufficient.

12. Study the following information carefully and answer the questions given beside:

E # 4 Y Q % G 8 A 5 \* U ! B 2 9 > X + P 3 Z ^ | S 7 M C 6 @ J K : W

Which of the following elements is fifth to the right of twelfth element from left end?

A X

B 2

C >

D 9

### Solution

The twelfth element from left end is 'U' and fifth to the right of U is '>'.

Hence option C is correct.

13.

**Study the given information and answer the following questions based on it.**

Ten students - A, B, C, D, E, P, Q, R, S and T are sitting on two different benches such that bench I is at west of bench II and five students are sitting on each bench but not in the same order. All of them are facing north and each of them likes different subjects - English, Hindi, Maths, History, Geography, Biology, Physics, Chemistry, Economics and Computer but not in the same order.

The student who likes Economics does not sit at middle of any bench. D is sitting second to the right of S who likes Chemistry. Neither D nor S sits at extreme end of any bench and none of them likes History. B who likes Hindi is sitting immediate right of T who likes Physics on the same bench. C sits at an extreme end of any bench but adjacent to neither D nor Q. P likes Computer. Q is sitting on bench I but immediate left of the student who likes History and none of them sits at any extreme end. The student who likes Biology sits on bench II. Two students are sitting between the students who like English and Maths. One person sits between A and E who likes Maths.

**A. Which of the following is true based on the given arrangement?**

**A** A is sitting second to the right of the person who likes Chemistry.

**B** C and R, are sitting adjacent to each other.

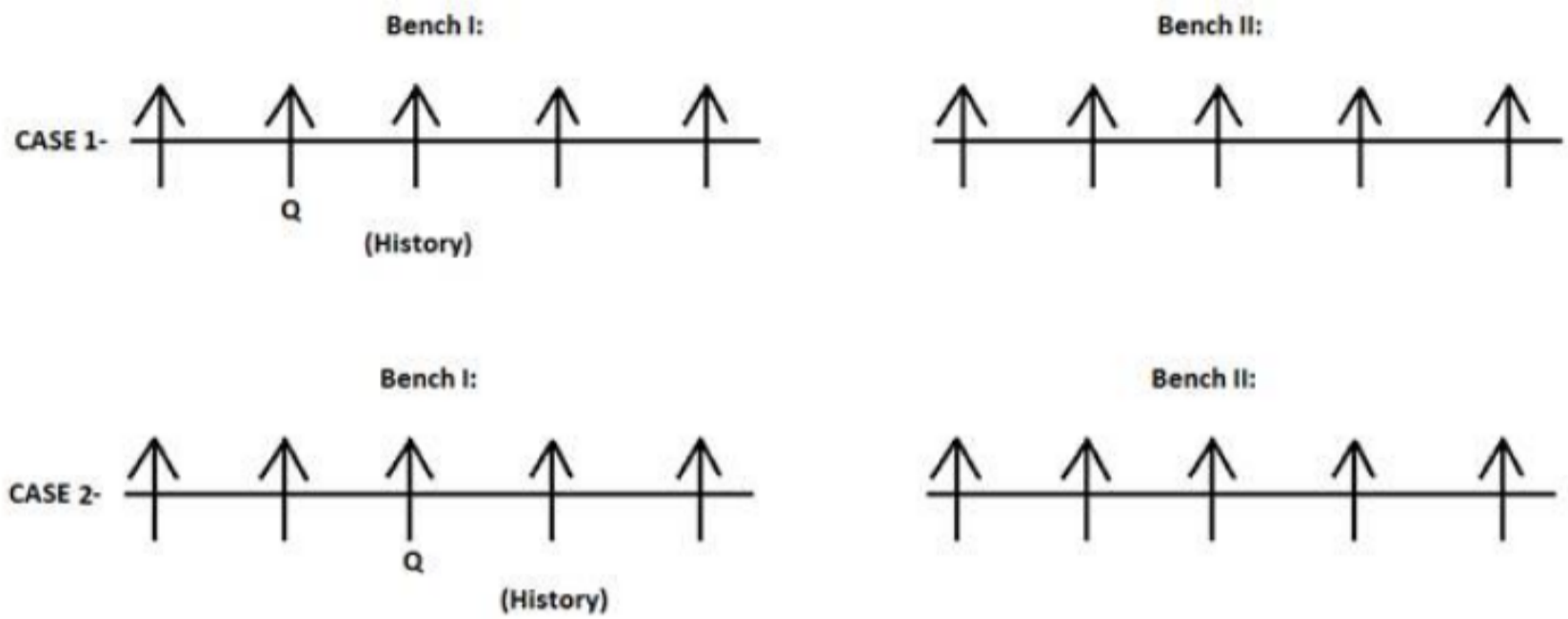
**C** Both B and P are sitting at extreme ends.

**D** E is sitting on Bench I.

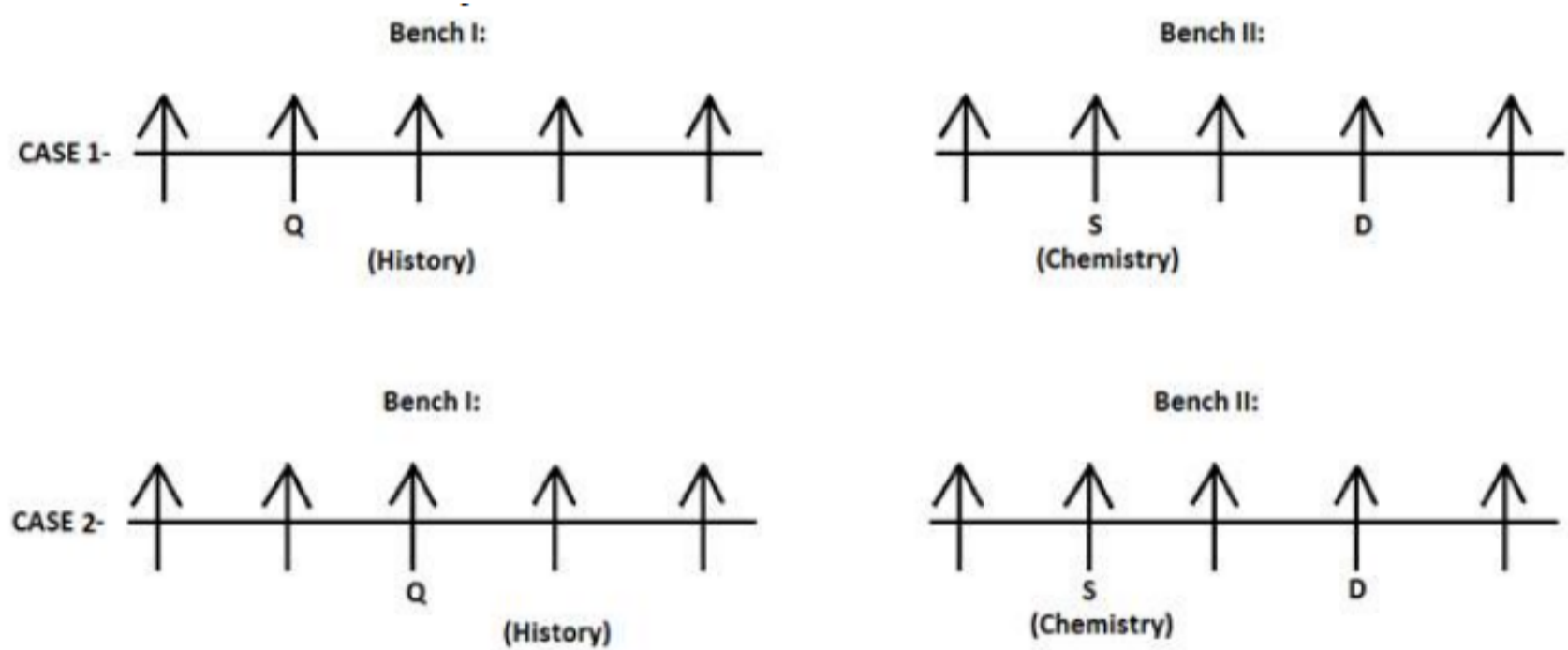


## Solution

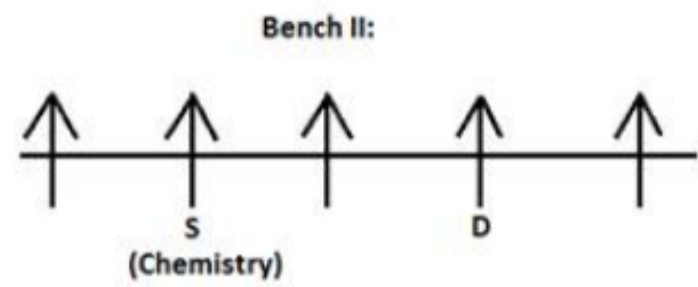
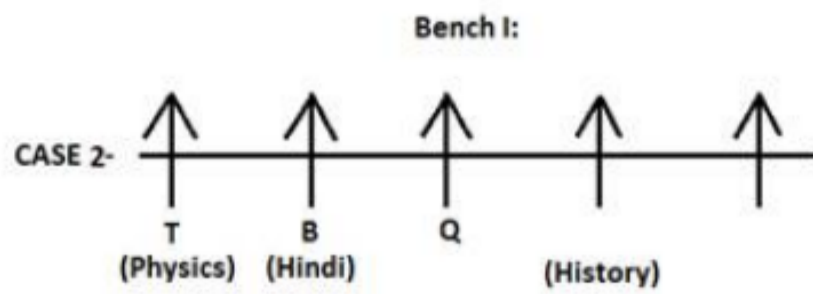
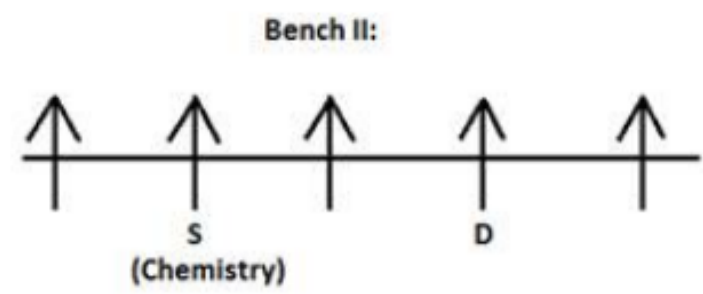
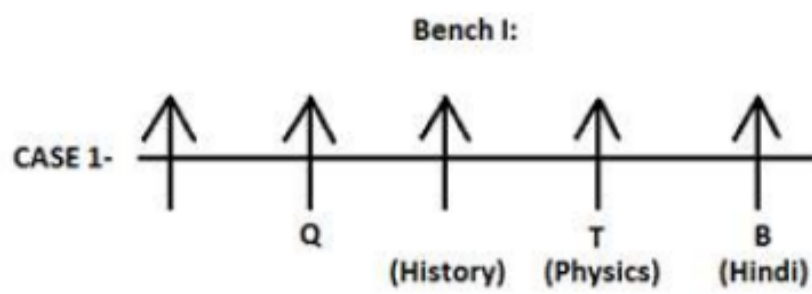
- Q is sitting on bench I but immediate left of the student who likes History and none of them sits at any extreme end.



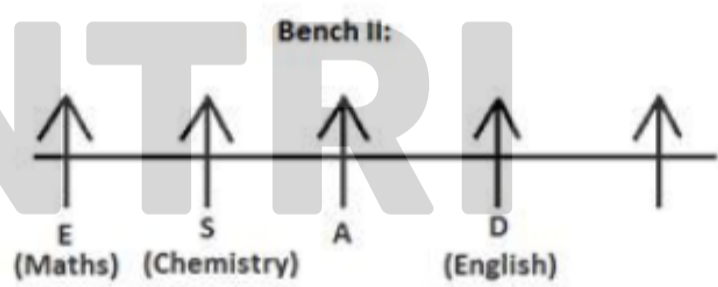
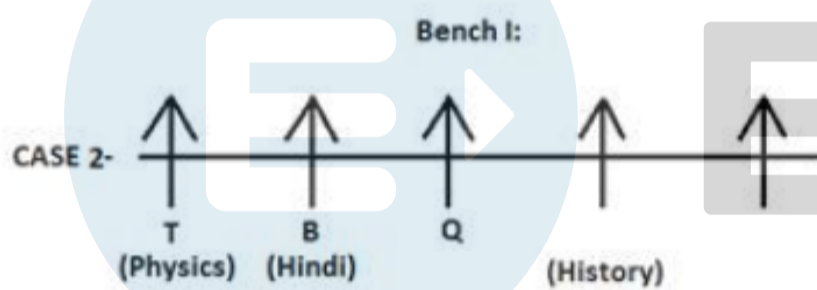
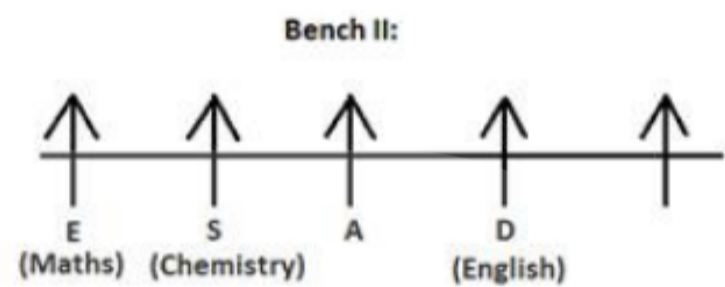
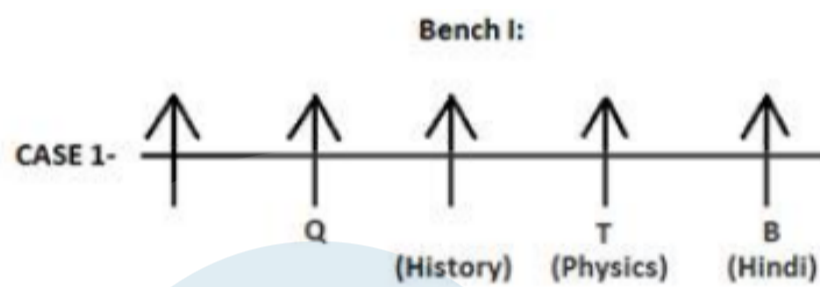
- D is sitting second to the right of S who likes Chemistry.
- Neither D nor S sits at extreme end of any bench and none of them likes History.



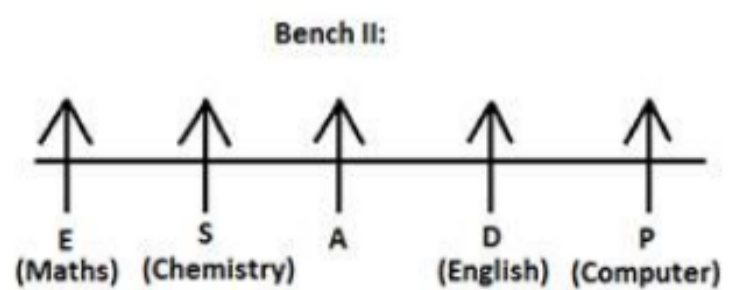
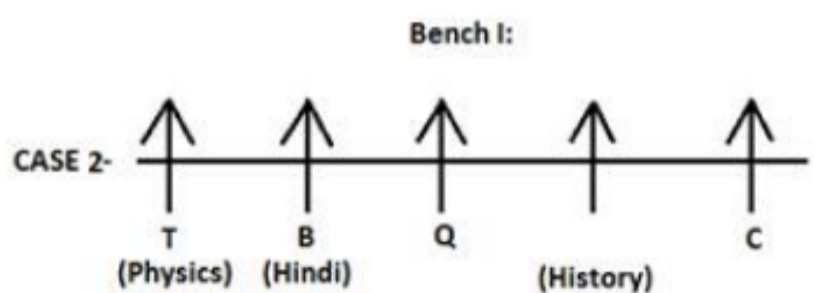
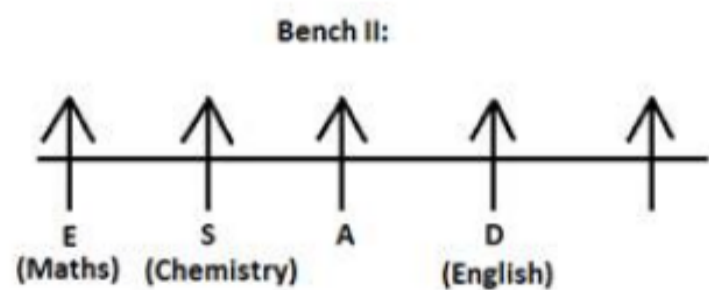
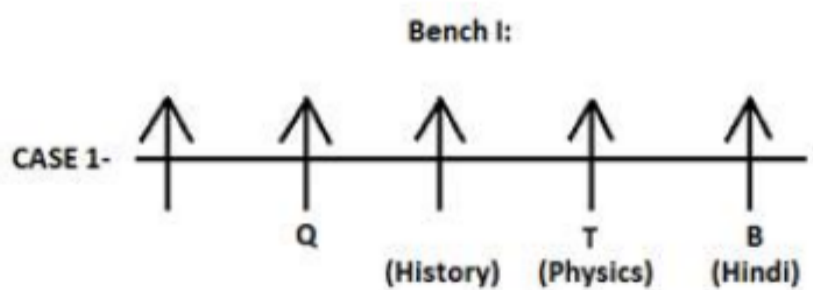
- B who likes Hindi is sitting immediate right of T who likes Physics on the same bench.



- Two students are sitting between the students who like English and Maths.
- One person sits between A and E who likes Maths.

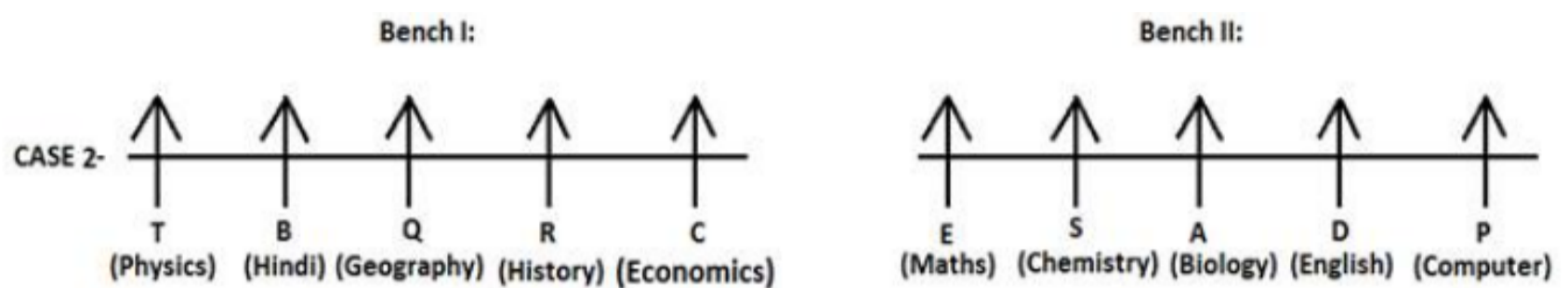


- C sits at an extreme end of any bench but adjacent to neither D nor Q.
- P likes Computer.



Here, we see that C will sit adjacent to either D or Q in case 1. Hence, it will be eliminated.

- The student who likes Economics does not sit at middle of any bench.
- The student who likes Biology sits on bench II.



C and R, are sitting adjacent to each other. Hence, 'b' is the correct option.

### B. Who likes Economics?

A R

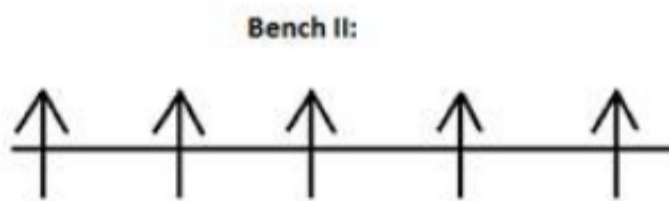
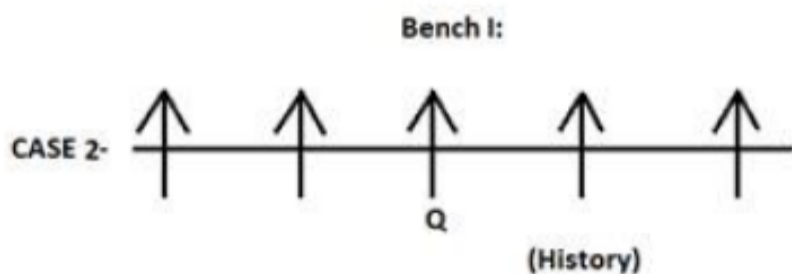
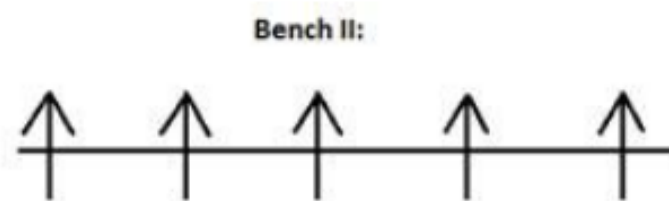
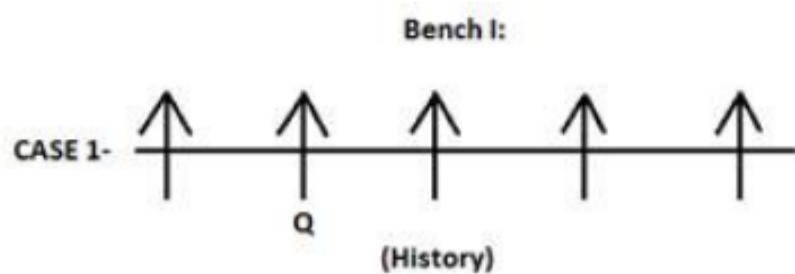
B A

C E

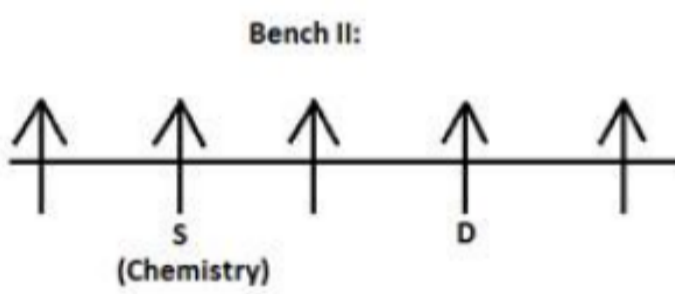
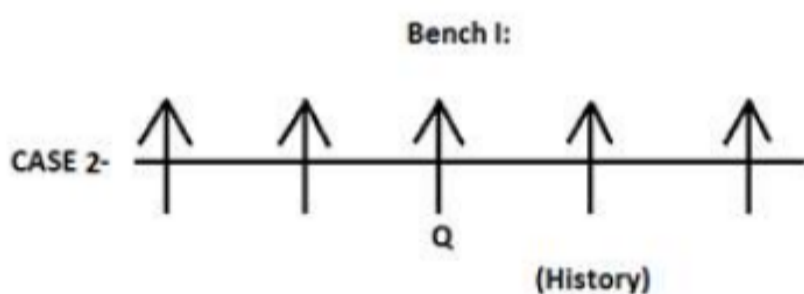
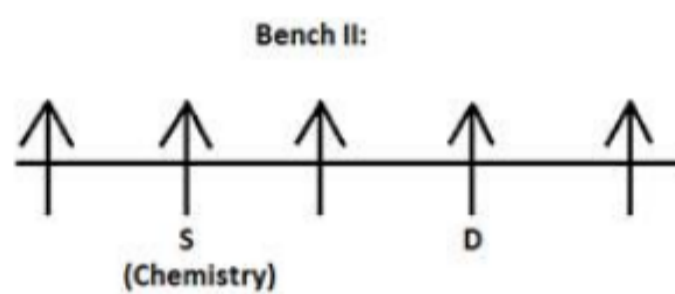
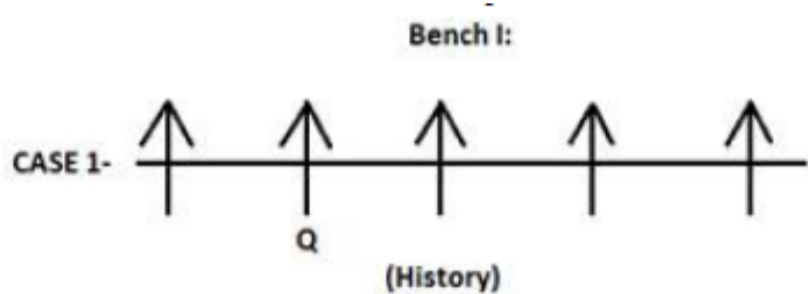
D C

### Solution

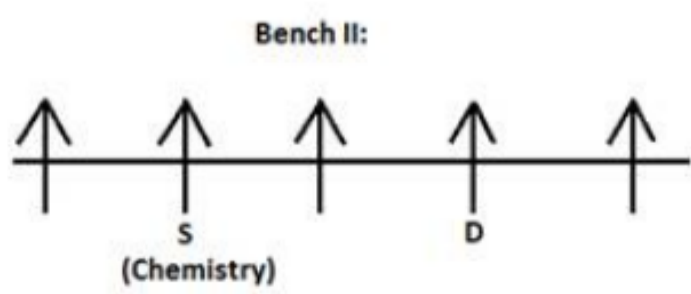
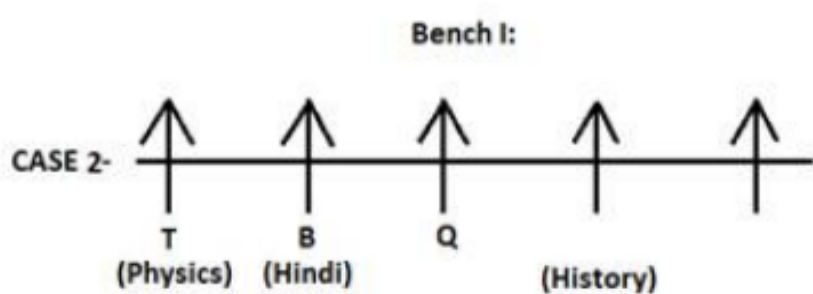
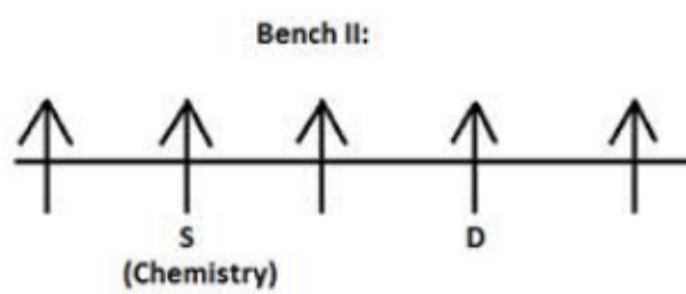
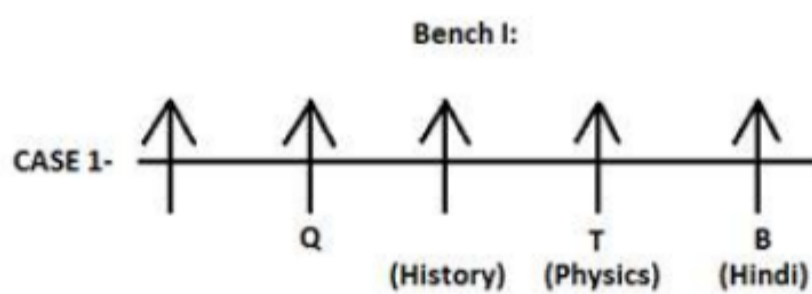
- Q is sitting on bench I but immediate left of the student who likes History and none of them sits at any extreme end.



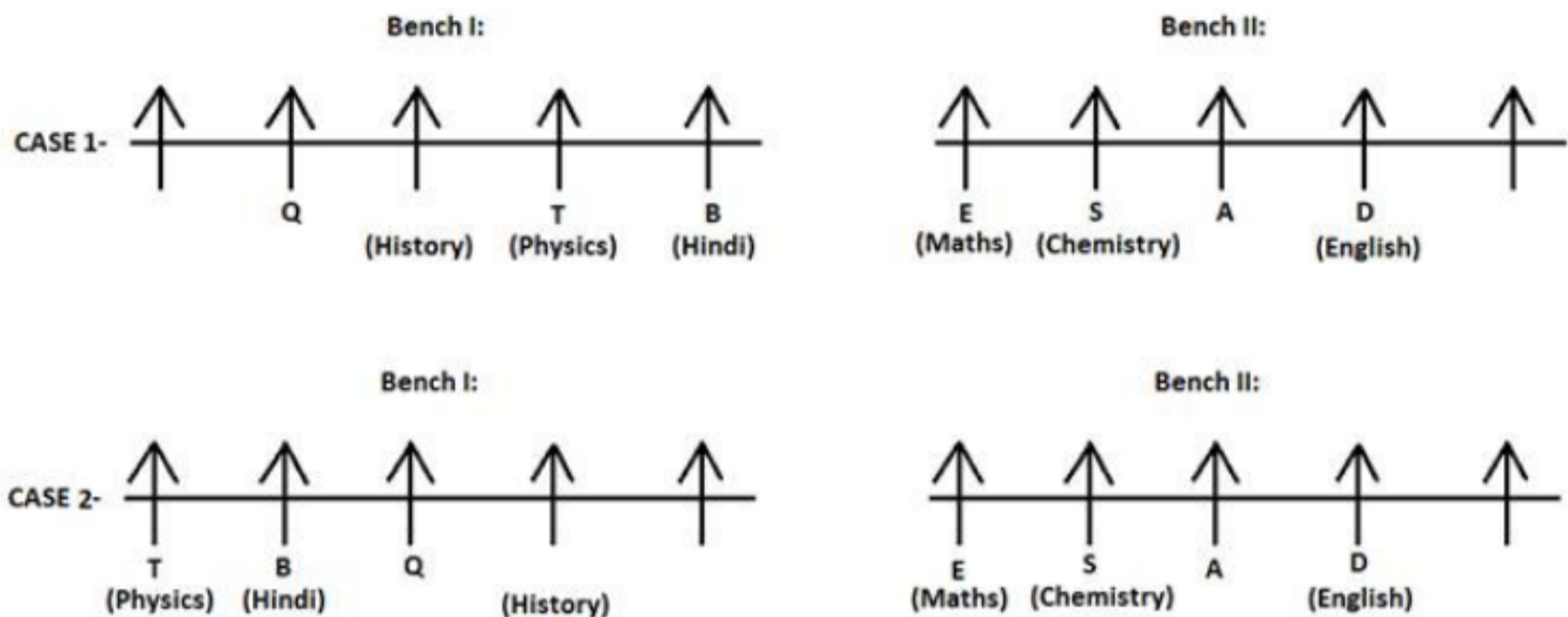
- D is sitting second to the right of S who likes Chemistry.
- Neither D nor S sits at extreme end of any bench and none of them likes History.



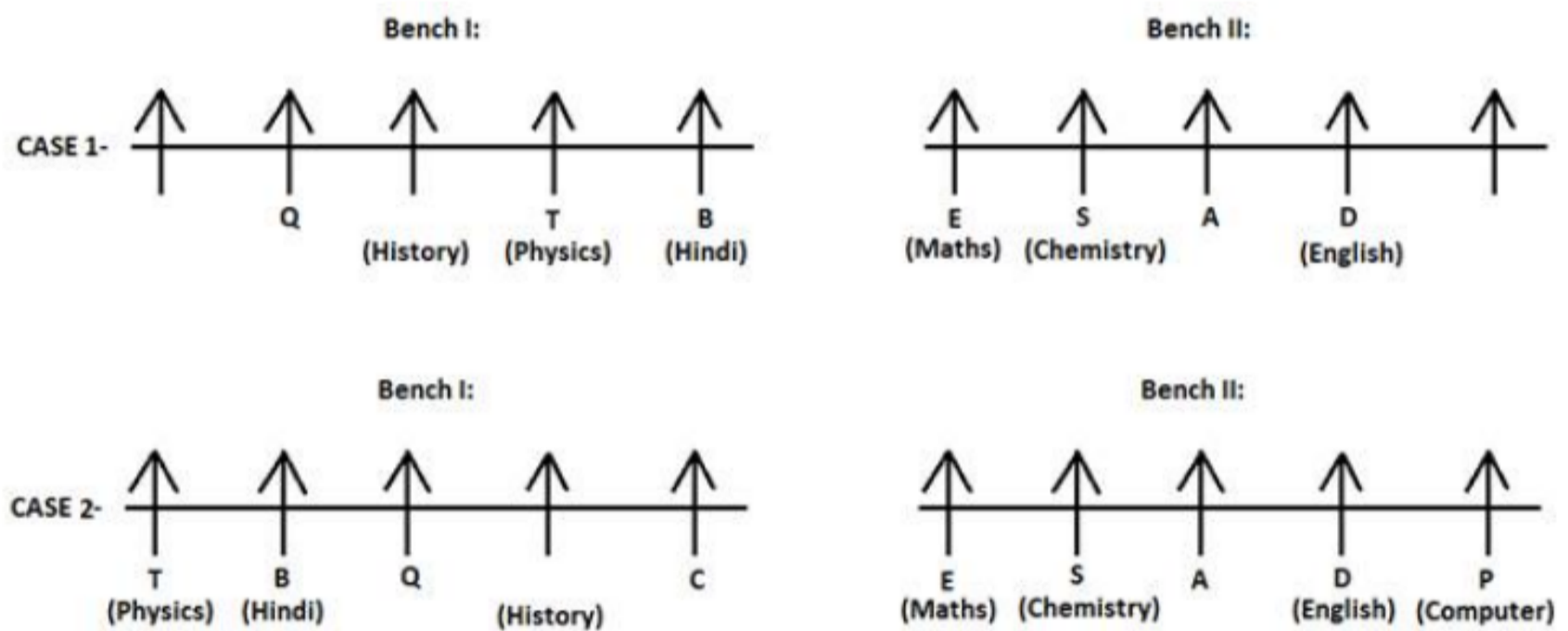
- B who likes Hindi is sitting immediate right of T who likes Physics on the same bench.



- Two students are sitting between the students who like English and Maths.
- One person sits between A and E who likes Maths.

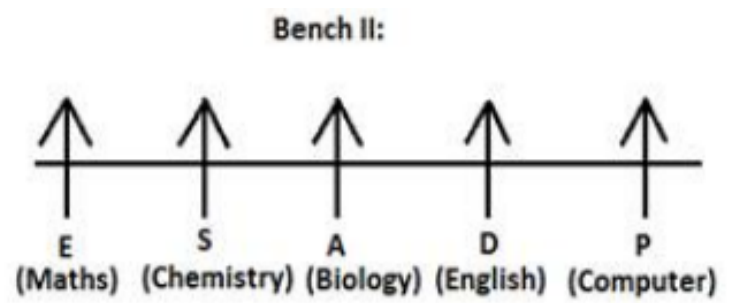
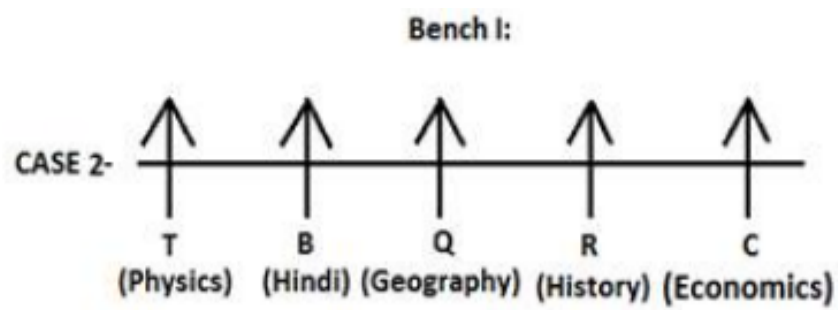


- C sits at an extreme end of any bench but adjacent to neither D nor Q.
- P likes Computer.



Here, we see that C will sit adjacent to either D or Q in case 1. Hence, it will be eliminated.

- The student who likes Economics does not sit at middle of any bench.
- The student who likes Biology sits on bench II.



C likes Economics. Hence, 'd' is the correct option.

**C. Find the incorrect pair.**

**A** D- English

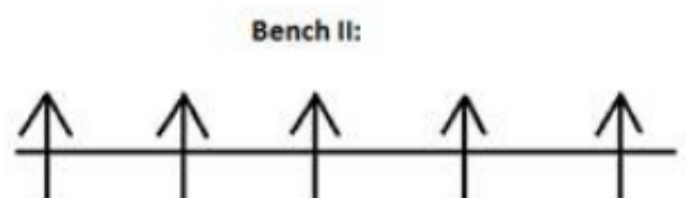
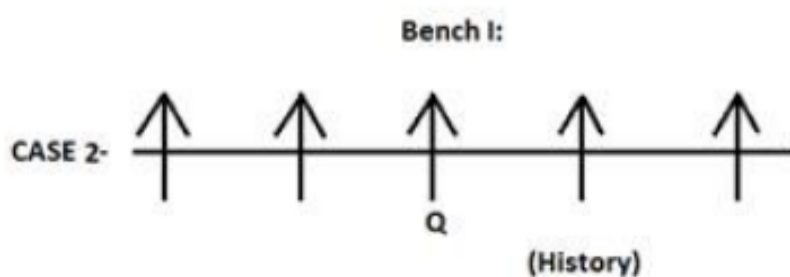
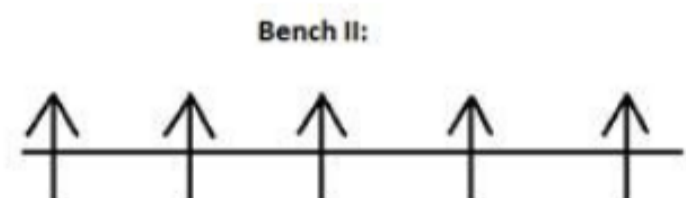
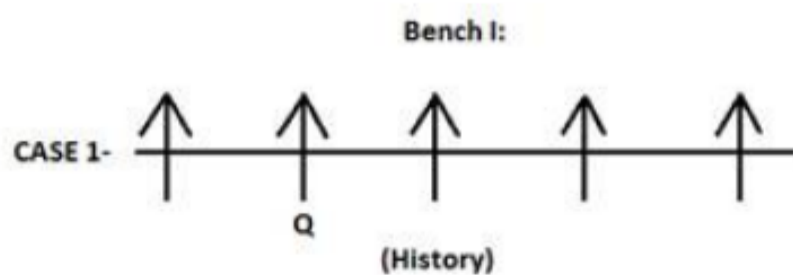
**B** T- Physics

**C** R - Maths

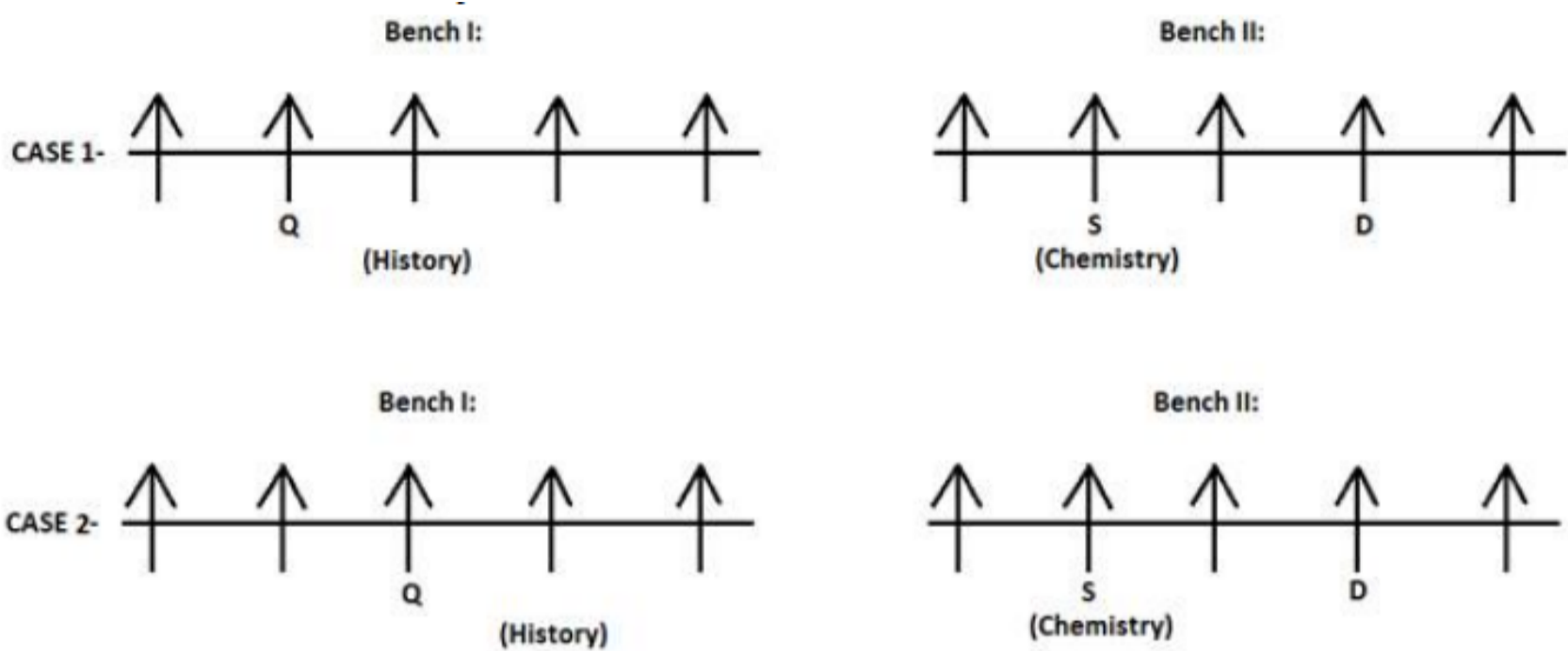
**D** B - Hindi

### Solution

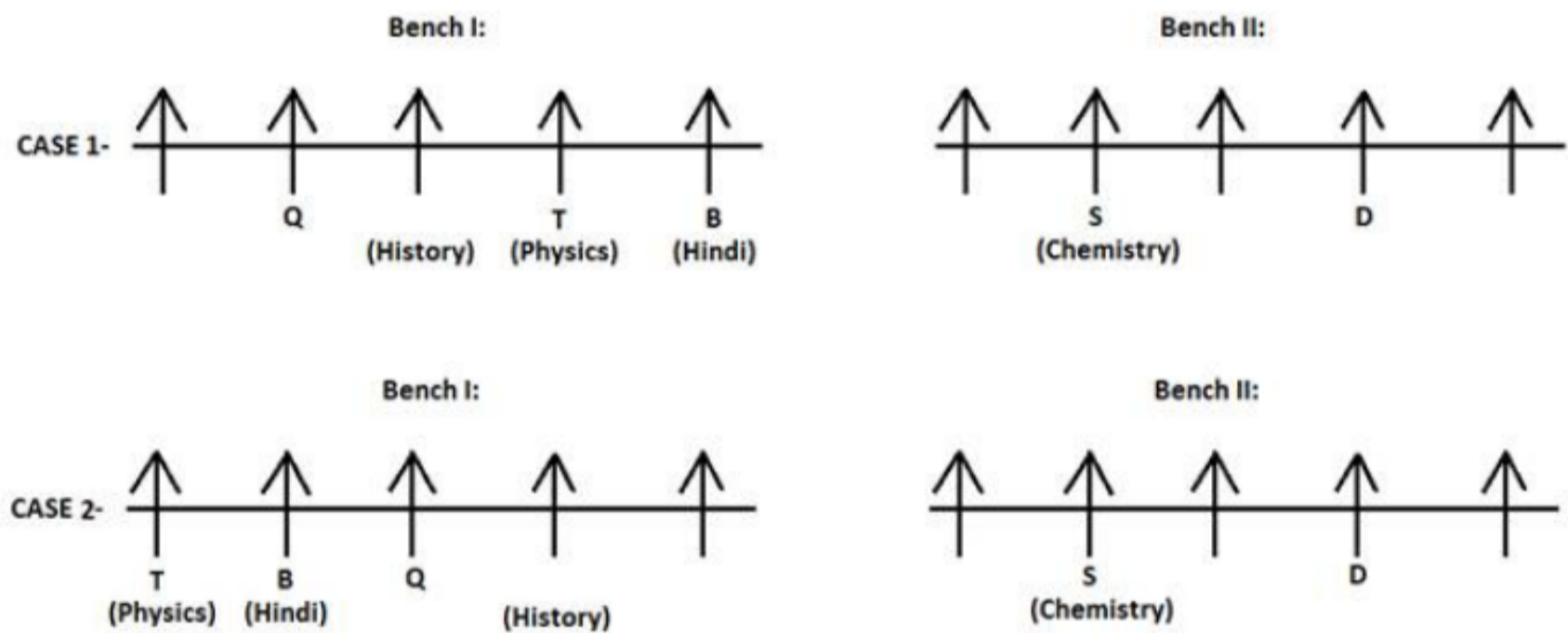
· Q is sitting on bench I but immediate left of the student who likes History and none of them sits at any extreme end.



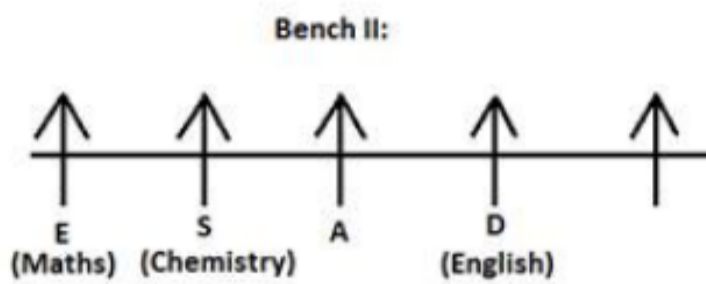
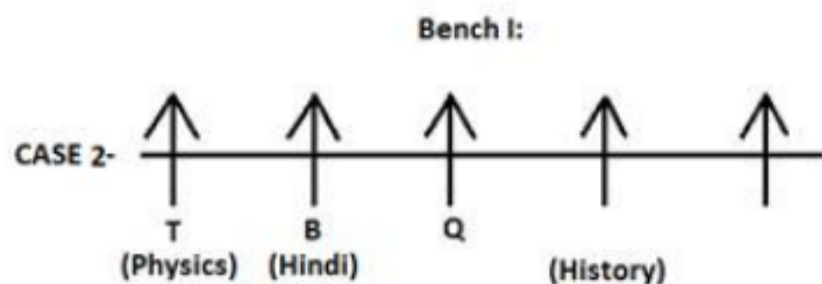
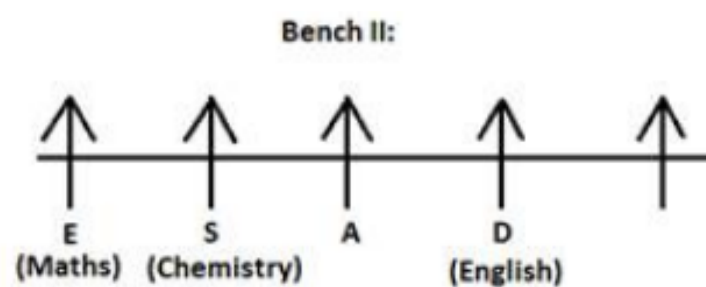
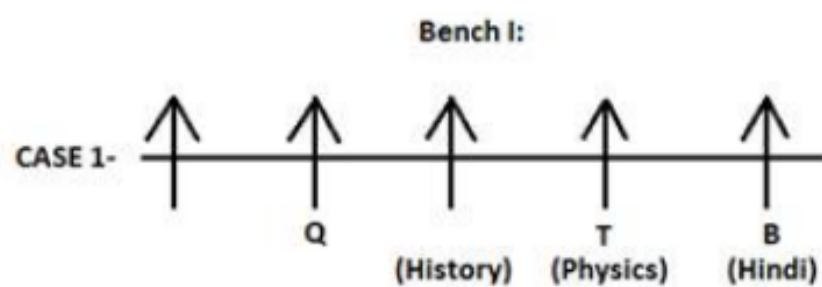
- D is sitting second to the right of S who likes Chemistry.
- Neither D nor S sits at extreme end of any bench and none of them likes History.



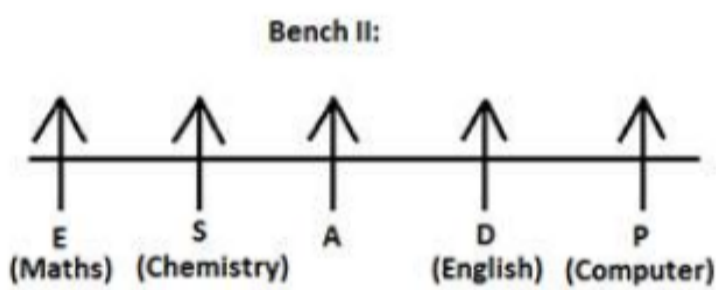
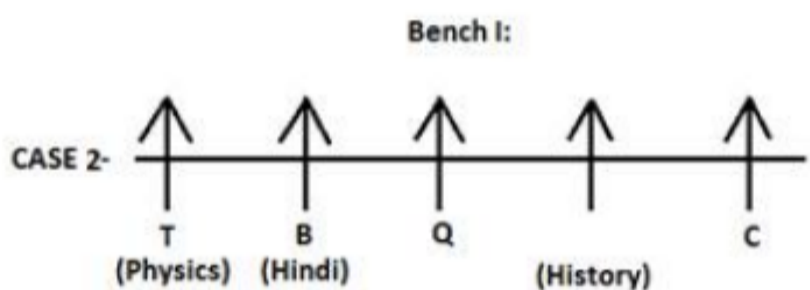
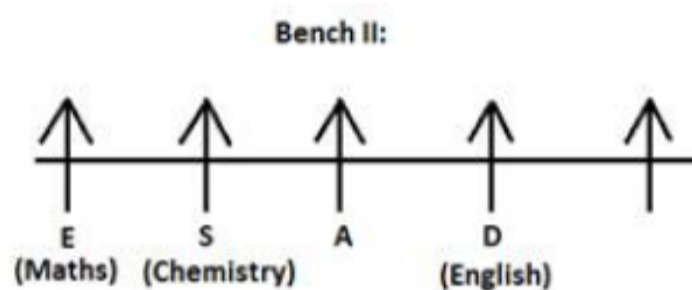
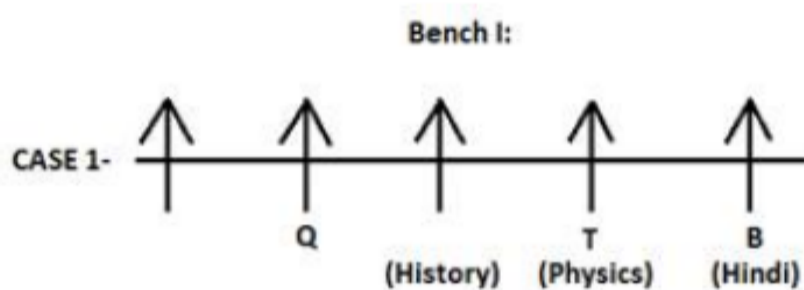
- B who likes Hindi is sitting immediate right of T who likes Physics on the same bench.



- Two students are sitting between the students who like English and Maths.
- One person sits between A and E who likes Maths.

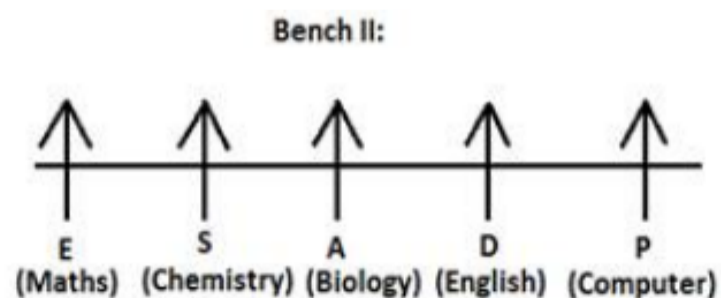
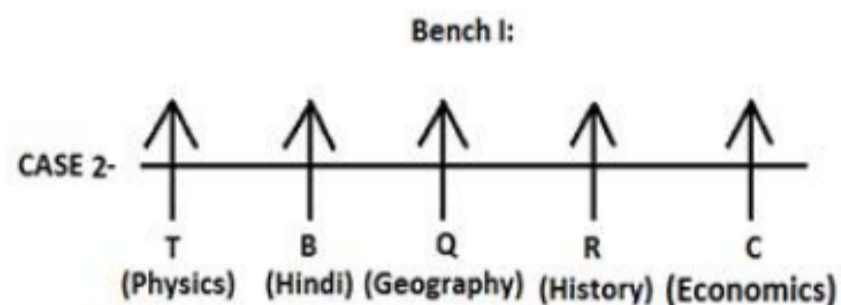


- C sits at an extreme end of any bench but adjacent to neither D nor Q.
- P likes Computer.



Here, we see that C will sit adjacent to either D or Q in case 1. Hence, it will be eliminated.

- The student who likes Economics does not sit at middle of any bench.
- The student who likes Biology sits on bench II.



R likes History. Hence, 'c' is the correct option.

**D. Which of the following pair sits on Bench II?**



**A** S and R

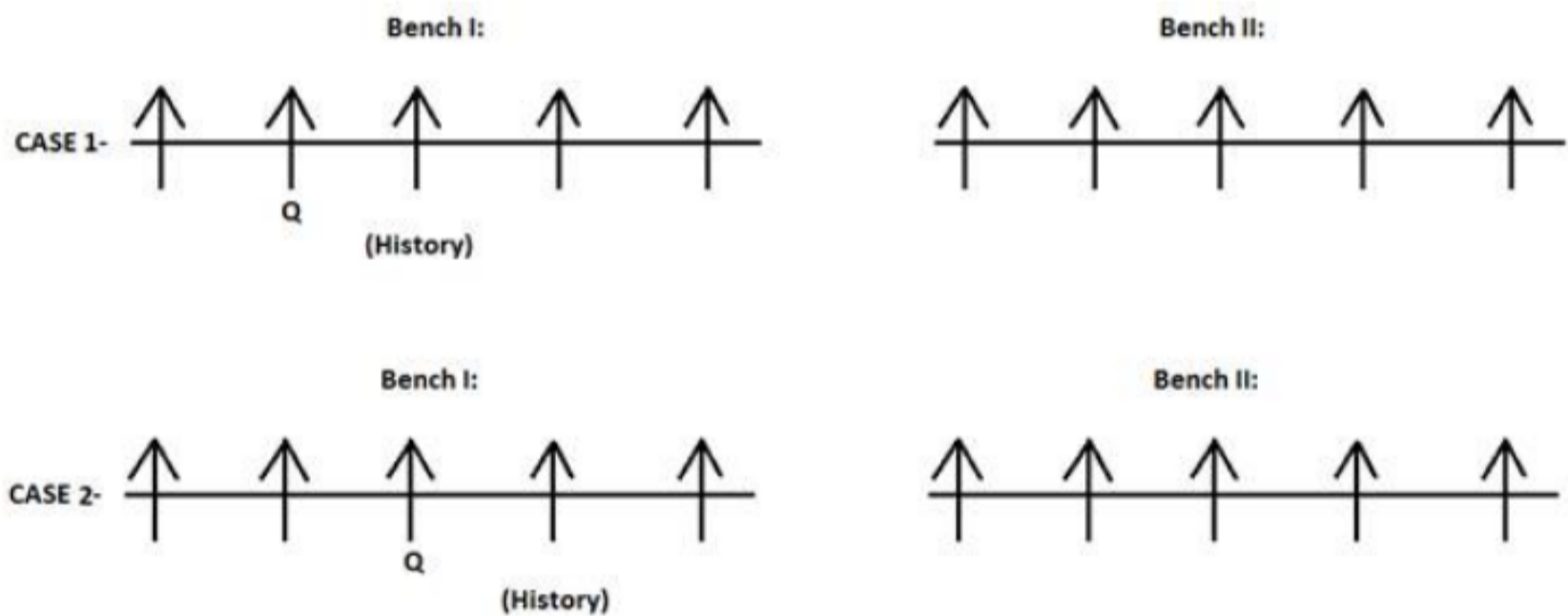
**B** C and T

**C** P and A

**D** E and B

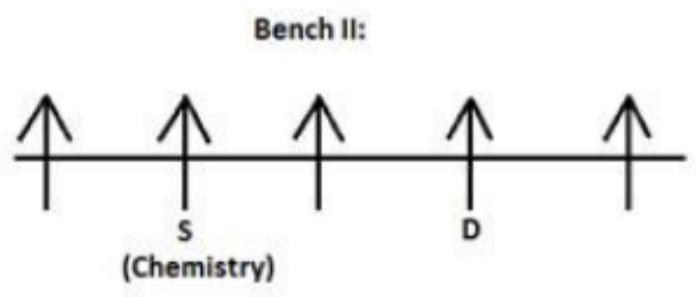
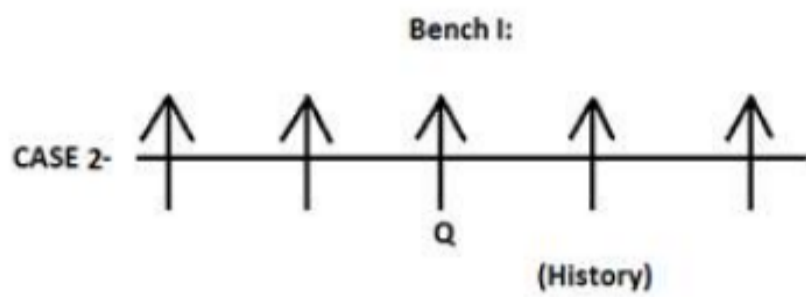
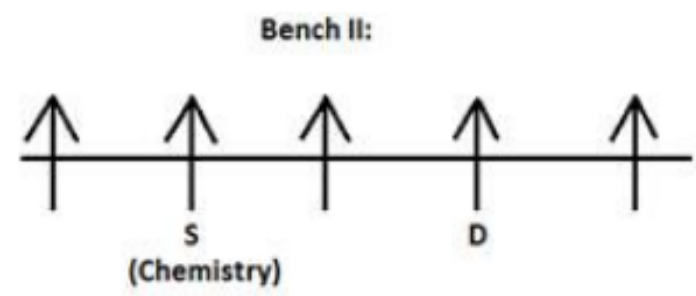
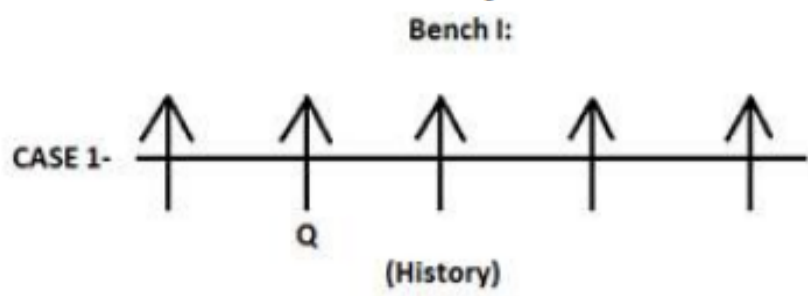
### Solution

· Q is sitting on bench I but immediate left of the student who likes History and none of them sits at any extreme end.

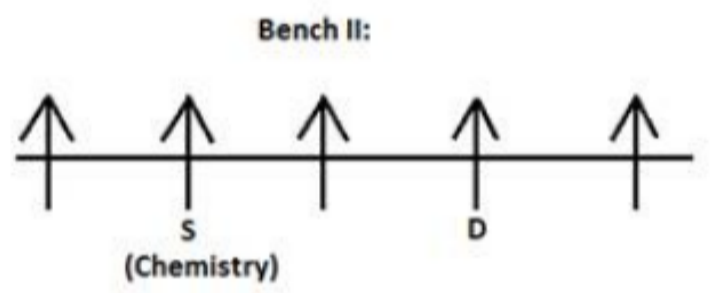
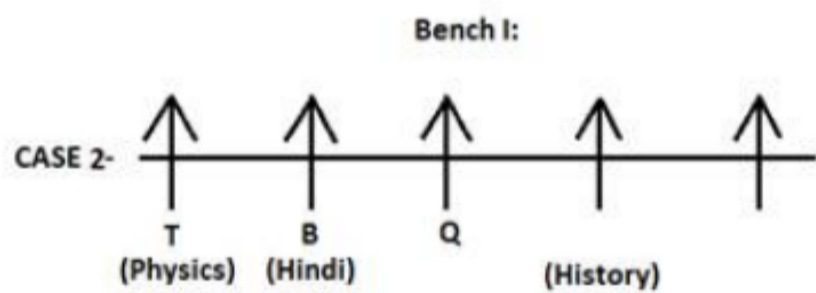
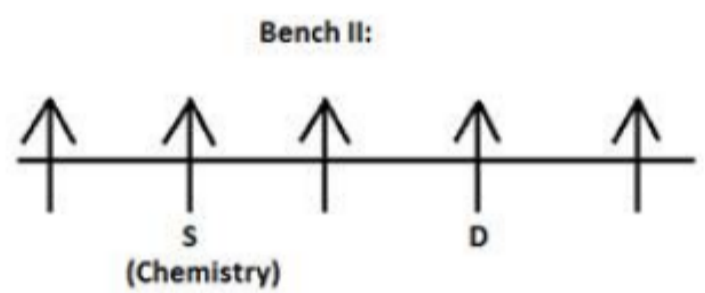
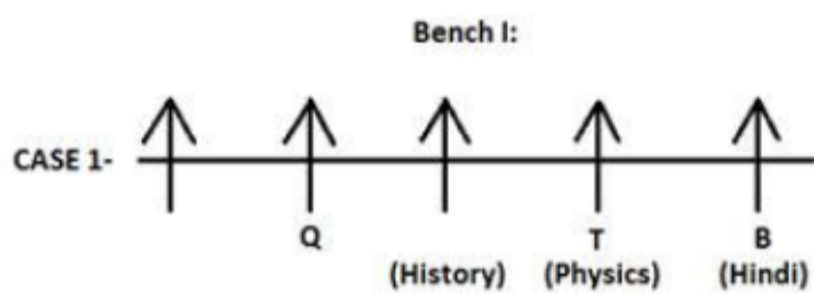


· D is sitting second to the right of S who likes Chemistry.

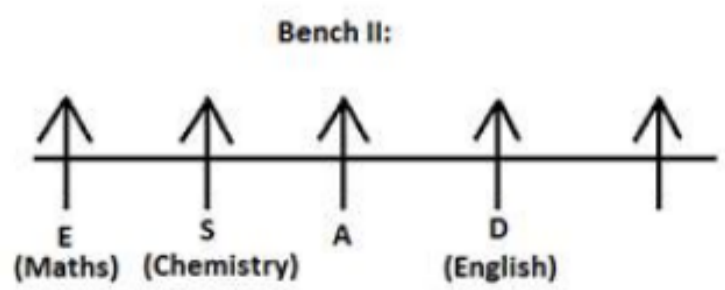
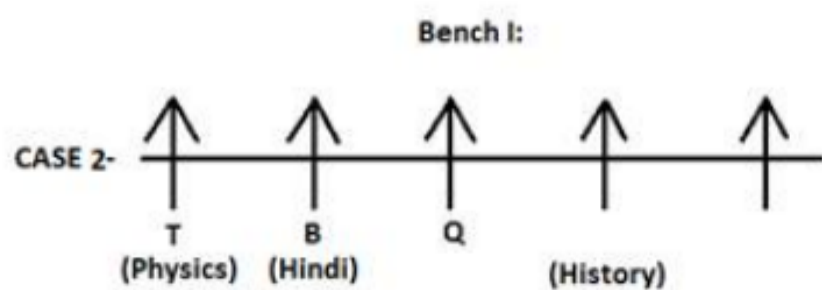
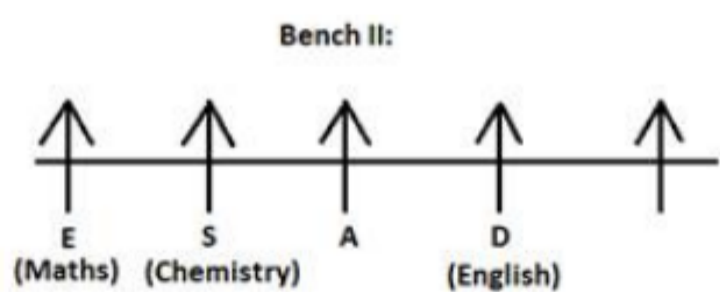
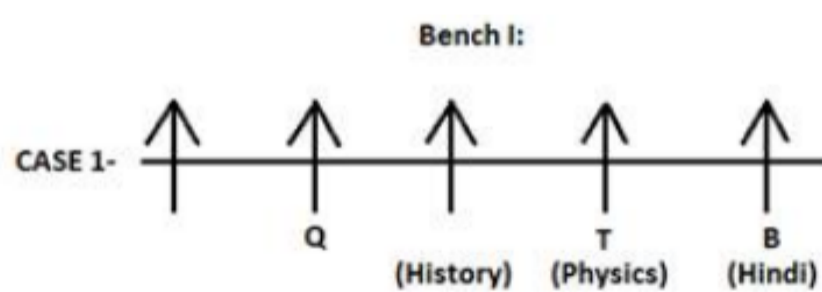
· Neither D nor S sits at extreme end of any bench and none of them likes History.



- B who likes Hindi is sitting immediate right of T who likes Physics on the same bench.

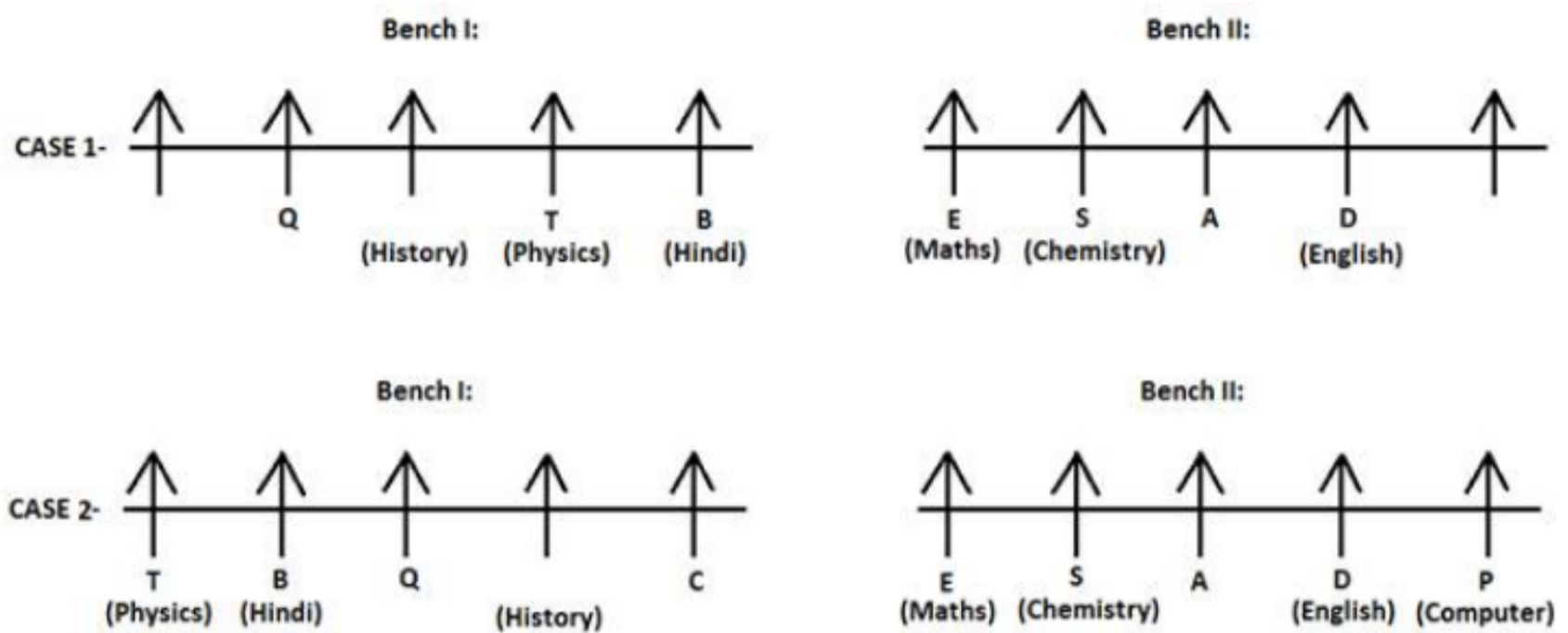


- Two students are sitting between the students who like English and Maths.
- One person sits between A and E who likes Maths.



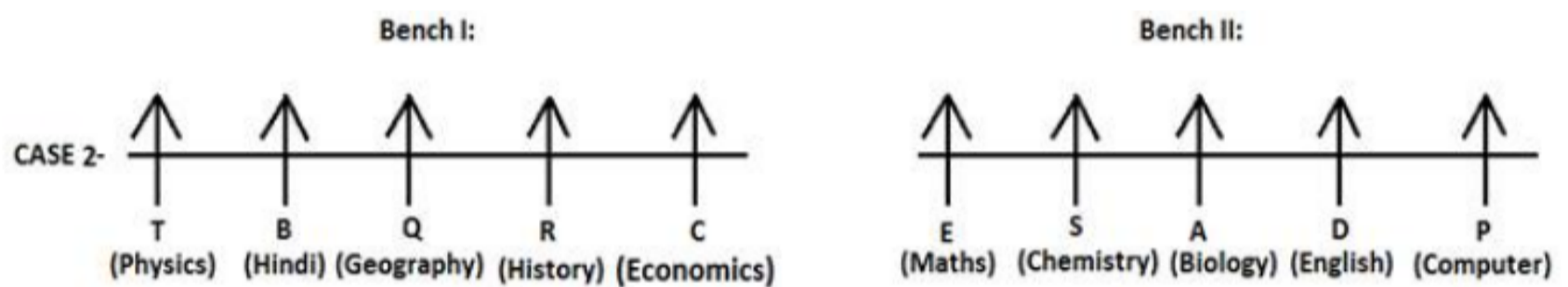
- C sits at an extreme end of any bench but adjacent to neither D nor Q.

- P likes Computer.



Here, we see that C will sit adjacent to either D or Q in case 1. Hence, it will be eliminated.

- The student who likes Economics does not sit at middle of any bench.
- The student who likes Biology sits on bench II.



Both P and A are sitting on Bench II. Hence, 'c' is the correct option.

The question below consists of a question and four statements numbered I, II, III and IV are given below it. You have to decide whether the data given in the statements are sufficient to answer the questions.

14. Seven people P, Q, R, S, T, U and V are standing on a ground at a certain distance from each other. S is standing 7 m to the west of T. What is the direction of Q with respect to U and what is the shortest distance between both of them ?

**Statement I:** U is standing to the west of P. V who is standing 3 m to the south of R is standing 4 m to the east of T.

**Statement II:** The shortest distance between Q and R is the same as the shortest distance between S and V. S is 5 m to the north of P.

**Statement III:** Q is standing to the west of R. The shortest distance between U and P is twice of the shortest distance between Q and S.

**Statement IV:** The shortest distance between T and R is the same as the shortest distance between S and P.

**A**

If the data in statement III and any two of the other three statements together are sufficient to answer the question

**B**

If the data in statements I, II and III together are necessary to answer the question

**C**

If the data in statements I or III are sufficient to answer the question

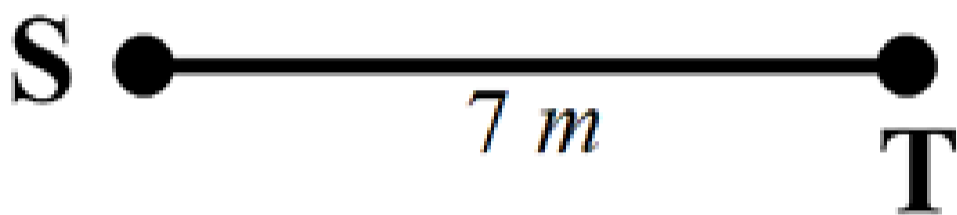
**D** If the data in statements I or IV are sufficient to answer the question

### Solution

It is given that,

Seven people P, Q, R, S, T, U and V are standing on a ground at a certain distance from each other. S is standing 7 m to the west of T.

We get,



From option (a);

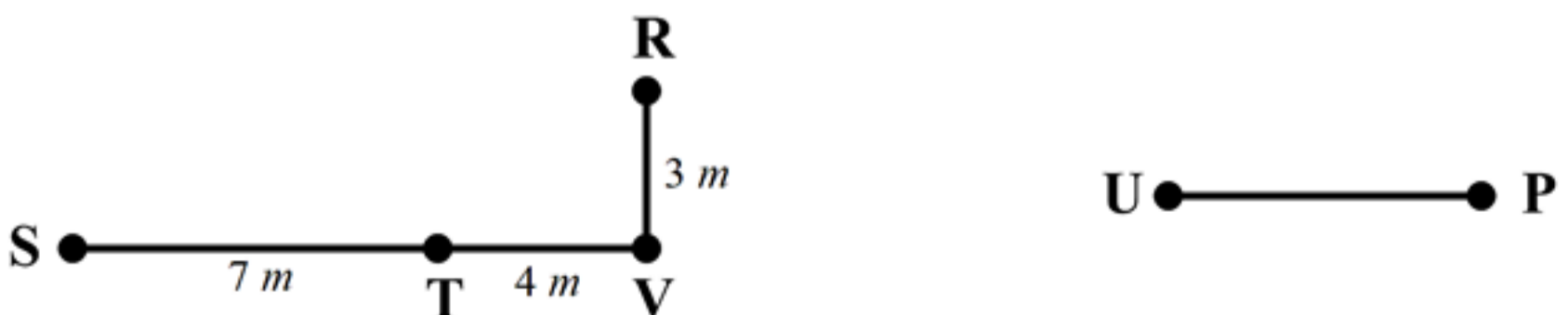
Statements I, III and IV,

U is standing to the west of P. V who is standing 3 m to the south of R is standing 4 m to the east of T.

Q is standing to the west of R. The shortest distance between U and P is twice of the shortest distance between Q and S.

The shortest distance between T and R is the same as the shortest distance between S and P.

We get,



Here, the distance between S and P = the distance between T and R

$$= \sqrt{(3)^2 + (4)^2} = \sqrt{(9 + 16)} = \sqrt{(25)} = 5 \text{ m}$$

We do not have any further information.

Hence, option (a) is not correct.

From option (b);

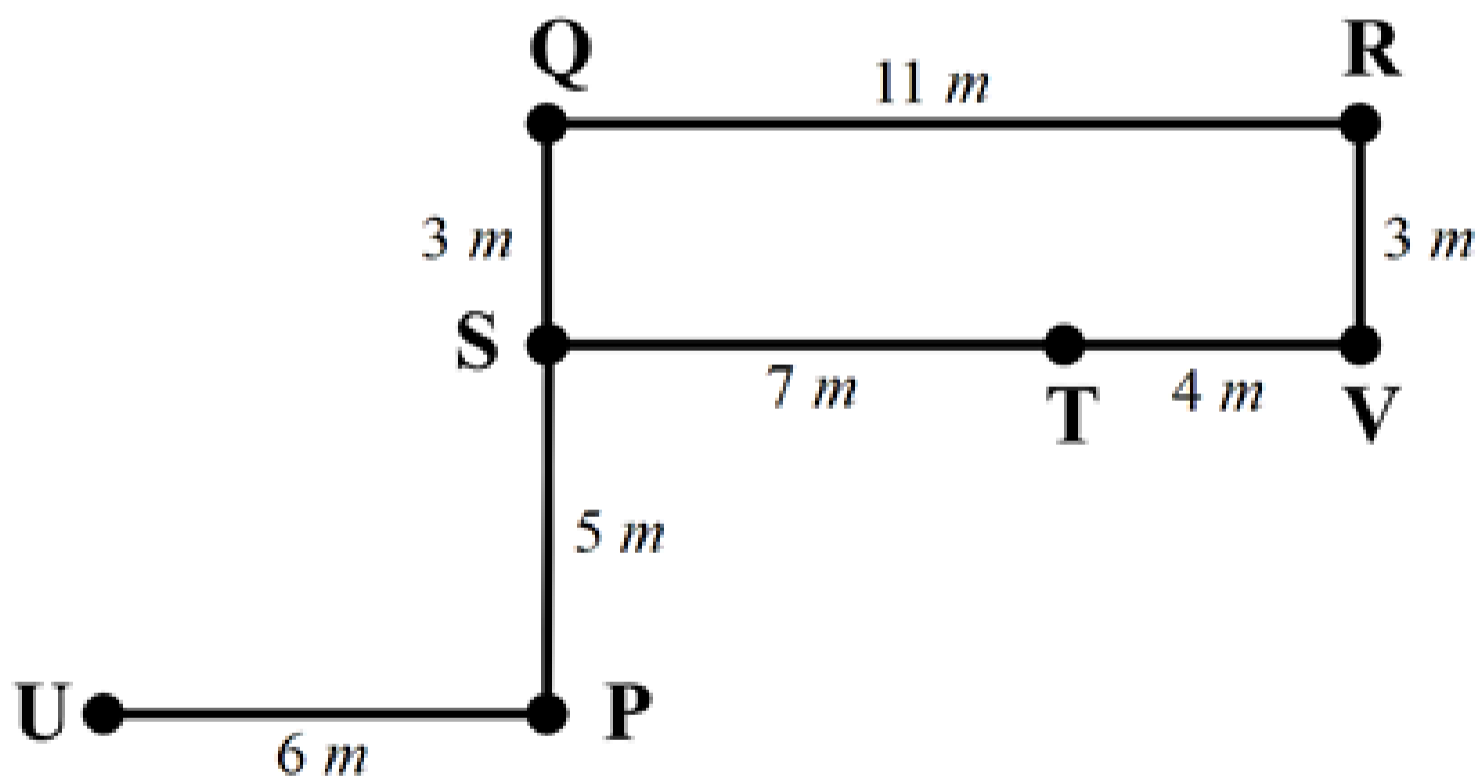
Statements I, II and III,

U is standing to the west of P. V who is standing 3 m to the south of R is standing 4 m to the east of T.

The shortest distance between Q and R is the same as the shortest distance between S and V. S is 5 m to the north of P.

Q is standing to the west of R. The shortest distance between U and P is twice of the shortest distance between Q and S.

We get,



Here, Q is standing to the north-east of U.

$$\text{The distance between Q and U} = \sqrt{(PQ)^2 + (UP)^2} = \sqrt{(8)^2 + (6)^2} = \sqrt{(64 + 36)} = \sqrt{(100)} = 10 \text{ m}$$

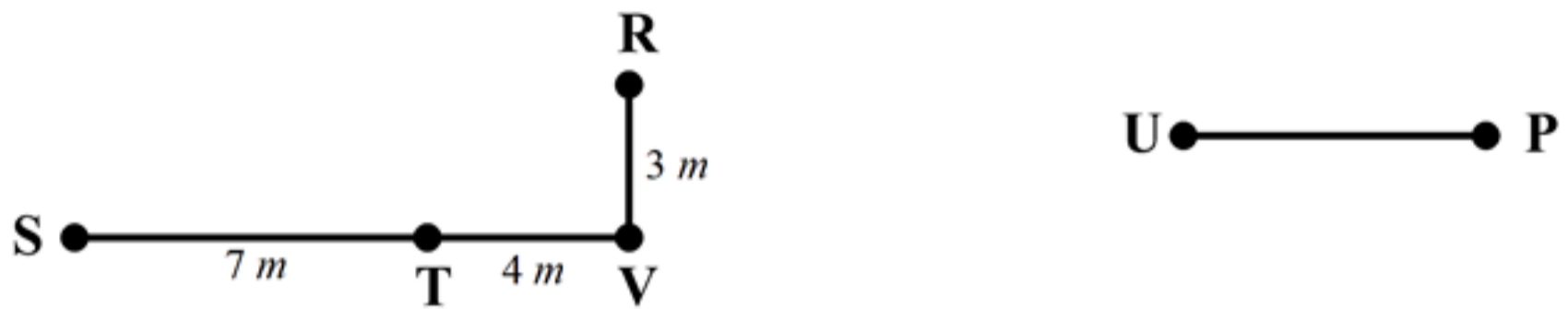
Hence, option (b) is correct.

From option (c);

Statements I,

U is standing to the west of P. V who is standing 3 m to the south of R is standing 4 m to the east of T.

We get,



We do not have any further information.

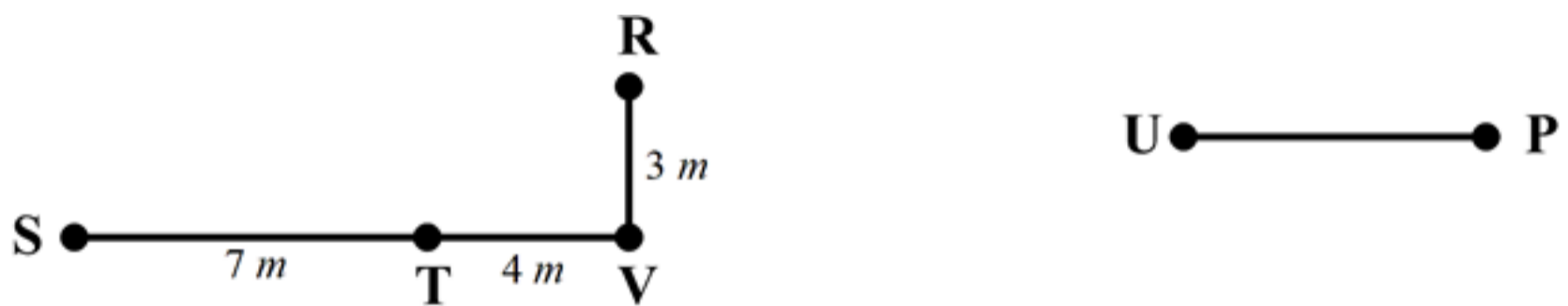
Hence, option (c) is not correct.

From option (d);

Statements I,

U is standing to the west of P. V who is standing 3 m to the south of R is standing 4 m to the east of T.

We get,



We do not have any further information.

Hence, option (d) is not correct.

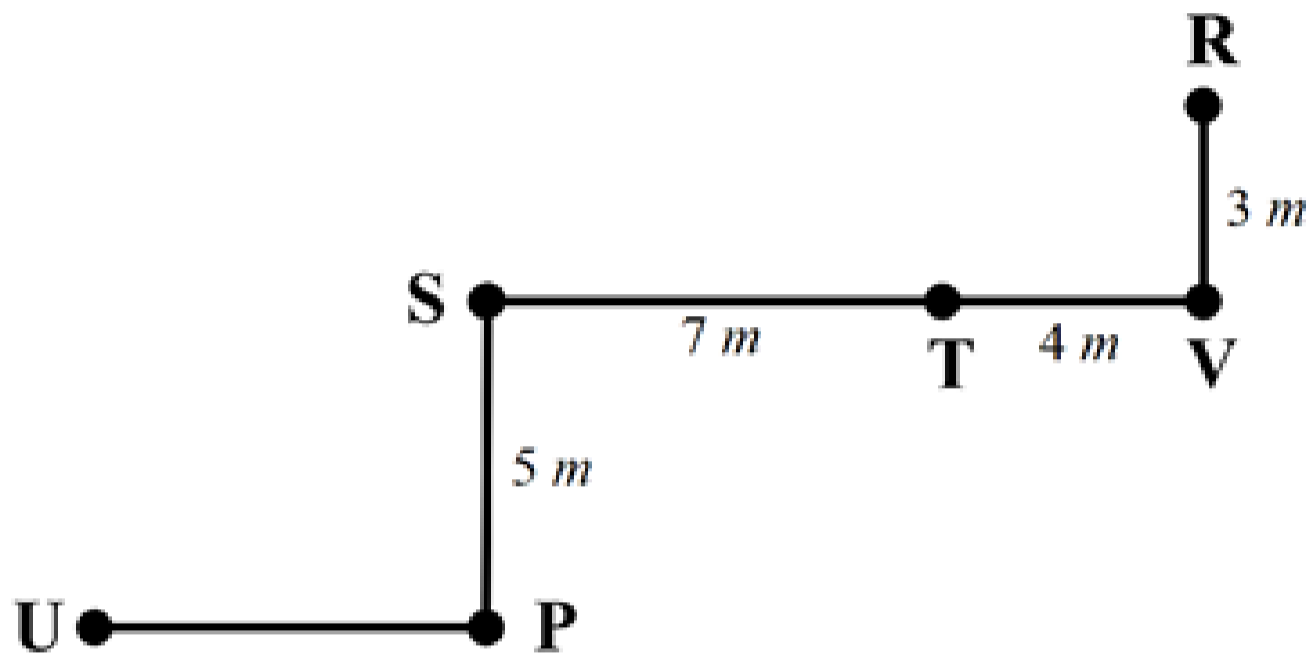
From option (e);

Statement I and II,

U is standing to the west of P. V who is standing 3 m to the south of R is standing 4 m to the east of T.

The shortest distance between Q and R is the same as the shortest distance between S and V. S is 5 m to the north of P.

We get,



We do not have any further information.

Hence, option (b) is not correct.



**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.**

- 15. 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.

### 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.

<b>Day</b>	<b>Person</b>
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.

**In the question given below, a passage is given followed by three statements. Read the passage and answer the question that follows.**

- 16. Users are spending more average watch time each month viewing content on different apps on their phones. The average watch time has increased over the past few years. The landscape has evolved from text and chat features to photo sharing, to video sharing and ultimately, to live streaming. At the heart of these trends is the importance of video, live streaming and the creator economy. Consumers are now shifting to a model of paying for content creators instead of professionally produced content.**

**I. Social apps occupied 740 billion hours of consumer time in the second quarter of 2021, which is equal to 24% of all time spent on mobile.**

**II. Seventy-four billion social apps downloaded to date: 4.7 billion downloads in the first half of 2021.**

**III. \$78 billion will be spent on social apps by 2025, with an estimated \$6.78 billion spent on social apps in the year 2021.**

**Which of the above statements can weaken the argument in the given passage that the watch time of videos on internet has increased over the years?**

**A** Only I and III

**B** All of I, II and III

**C** None of I, II and III

**D**

Only I and II

**Solution**

None of I, II and III weakens the argument in the given passage. All of I, II and III state about the increase in time spent on social apps by users and none of them specifically state about the video streaming apps. So, (c) is the correct answer.

**In the question below, two statements are given, followed by two assumptions on which the passage may or may not lie. From the options below, choose the one that reflects the correct choice of assumptions that follow.**

- 17. Statement: Mars may loom in our collective imaginations as the next world out, but prospects for humans living there are actually dim. The landscape is arid, and Martian dust is especially toxic. The trip to Mars would expose travellers to lethal levels of radiation, which engineers and astrobiologists are hoping to mitigate by itself eventually.**

**Assumption I: Scientists, engineers and researchers are working on methods to mitigate the toxicity and adverse living conditions in Mars.**

**Assumption II: Mars is considered to be the next possible planet that can support the study of extra-terrestrial radiations and possible living conditions for human beings.**

**A** Only assumption I is implicit.

**B** Only assumption II is implicit.

**C** Both assumptions I and II are implicit.

**D** Neither assumption I nor II is implicit.

## **Solution**

Assumption I talks about the work that scientists and engineers do with respect to Mars to make it suitable for human living. This assumption is a contrast to the given statement which states that the engineers and astrobiologist only expect the atmospheric condition in Mars to get better by itself and they are not engaged in any such activity that is mentioned in assumption I. Assumption II talks about Mars as the next possible destination to study extra-terrestrial radiations and possibility of human life. This assumption is also irrelevant to the given statement as nowhere in the statement it is mentioned about the possible study of conditions for 'human living'. So, both assumptions I and II are not implicit to the given statement.

Hence, the correct answer is option (d).



**The question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question:**

- 18. Seven friends- L, M, N, O, P Q and R live in seven storey building, but not necessarily in the same order. The bottommost floor is numbered 1 while the topmost floor is numbered 7. \_ lives immediately below Q.**

**Statement I: Three persons live above P but below R. M lives below Q and R. L lives immediately above N but below Q. Q does not live on an even number floor. O lives above M.**

**Statement II: O lives immediate above R. Two persons live between Q and P, who lives immediate above M. M lives below L but above N. Q lives on a prime numbered floor.**

**A**

**If the data in the statement II alone is sufficient to answer the question, while the data in the statement I alone is not sufficient to answer the question.**

**B**

If the data in both statement I and statement II together are not sufficient to answer the question.

**C**

If the data in statement I alone is sufficient to answer the question, while the data in the statement II alone is not sufficient to answer the question.

**D**

If the data in both statement I and statement II together are sufficient to answer the question.

**Solution**

Seven friends- L, M, N, O, P Q and R live in seven storey building, but not necessarily in the same order. The bottommost floor is numbered 1 while the topmost floor is numbered 7.

From statement I only:

Three persons live above P but below R.

	Case 1	Case 2	Case 3
Floors	Persons	Persons	Persons
7			R
6		R	
5	R		
4			
3			P
2		P	
1	P		

Q does not live on an even number floor.

	Case 1	Case 1a	Case 2	Case 2a	Case 2b	Case 2c	Case 3	Case 3a
Floor	Person	Person	Person	Person	Person	Person	Person	Person
7	Q		Q				R	R
6			R	R	R	R		
5	R	R		Q			Q	
4								
3		Q			Q		P	P
2			P	P	P	P		
1	P	P				Q		Q

L lives immediately above N but below Q. So, cases 1a, 2b, 2c and 3a cancelled.

M lives below Q and R.

O lives above M.

	Case 1		Case 2		Case 2a	Case 3
Floor	Person	Person	Person	Person	Person	Person
7	Q	Q	Q	Q	O	R
6	O	O	R	R	R	O
5	R	R	L	O	Q	Q
4	L	M	N	L	L	M
3	N	L	O	N	N	P
2	M	N	P	P	P	L
1	P	P	M	M	M	N

Thus, there are many possible cases.

So, statement I alone is not sufficient.

From statement II only:

Q lives on a prime numbered floor. Two persons live between Q and P, who lives immediate above M.

	Case 1	Case 2	Case 3	Case 4
Floors	Persons	Persons	Persons	Persons
7	Q			
6			P	
5		Q	M	P
4	P			M
3	M		Q	
2		P		Q
1		M		

O lives immediate above R.

M lives below L but above N. Thus case 1, case 2 and case 4 cancelled.

Floors	Persons
7	L
6	P
5	M
4	N
3	Q
2	O
1	R

Thus, statement II alone is sufficient.

**A statement is given followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. Consider the statement and following assumptions and decide which of the assumptions is implicit in the statement.**

**19. Statement:**

**Our natural inclination toward sleeping at certain times of the night (or day) is called our chronotype, and it's more than a simple preference. According to sleep scientists, chronotypes are at least partly genetic, so changing yours is going to be an uphill battle.**

**Assumptions:**

**I. Our behaviour patterns and instincts design the chronotypes that affect our sleep cycles.**

**II. The study of sleep scientists was partly based on genetics that influences our sleep timings.**

**A Only Assumption I is implicit.**

**B Only Assumption II is implicit.**

**C Either Assumption I or Assumption II is implicit.**

**D Neither Assumption I nor Assumption II is implicit.**

**Solution**

According to the passage, chronotypes are the timings of our sleep. It also states that chronotypes are partly genetic and changing is a difficult task. So, it is possible to change our sleep cycles by altering our behaviours and tendency. So, statement I is implicit.

The passage doesn't mention the study of scientists. So, statement II is not implicit.

Hence, option (a) is the correct answer.

**20. In a certain code language,**

A (+&)12B means A is the mother of B and is 15m west of B.

A (\*#) 7B means A is the wife of B and is 11m south of B.

A (<%) 5B means A is the son of B and is 3m east of B.

A (>@) 16B means A is the daughter of B and is 10m north of B.

A (\*@) 4B means A is the daughter of B and is 8m south of B.

A (>#) 19B means A is the wife of B and is 13m north of B.

Read the following directions and answer the questions that follow:

L (>#) 17 N, K (<%) 23 L, U (+%) 6L, P (\*#) 21 U, Z (>@) 8 U, P (+&) 10 T

**A. Four of the following are similar. Find the odd from the rest.**

**A** ZL

**B** PN

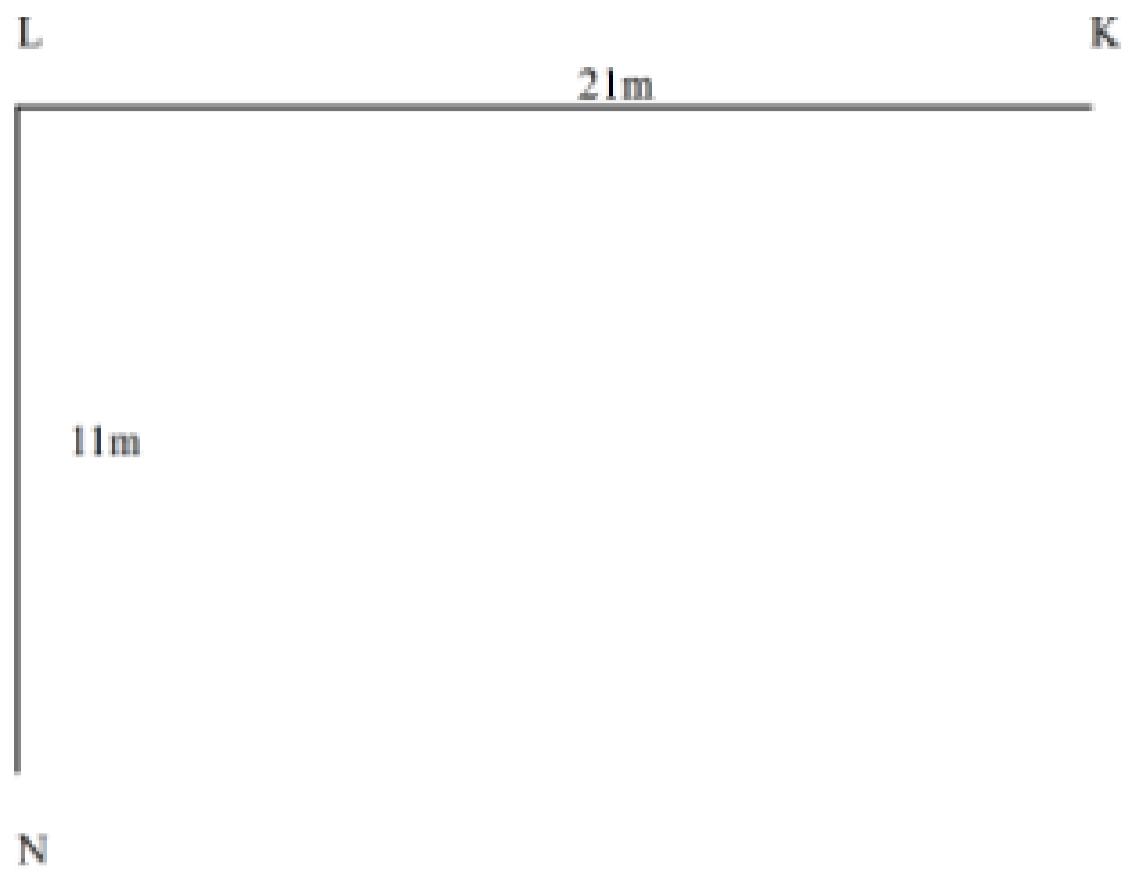
**C** UN

**D** ZT

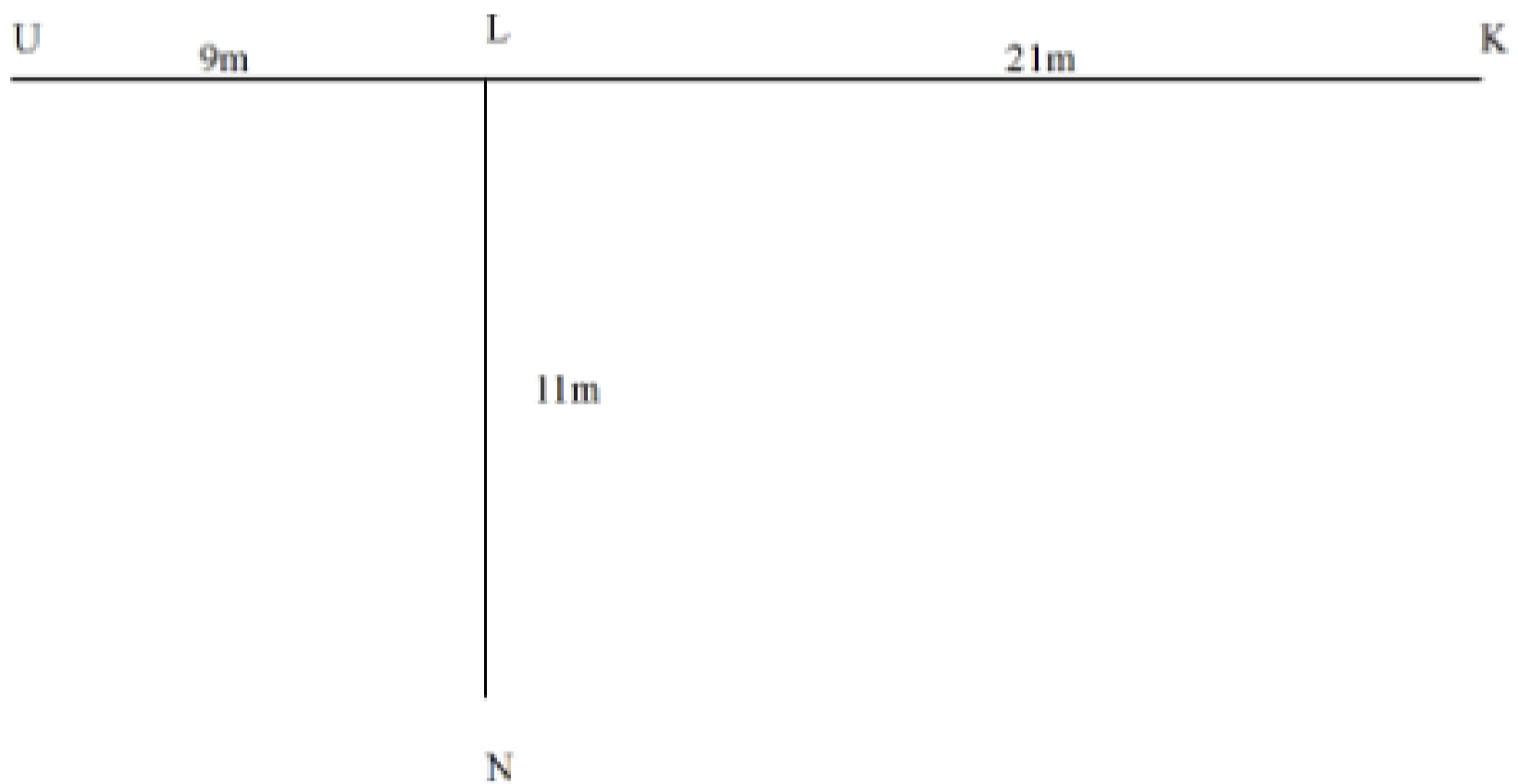
**Solution**

L ># 17 N, means L is the wife of N and is 11 m north of N.

$K \lt \% 23 L$ , means K is the son of L and is 21m east of L.



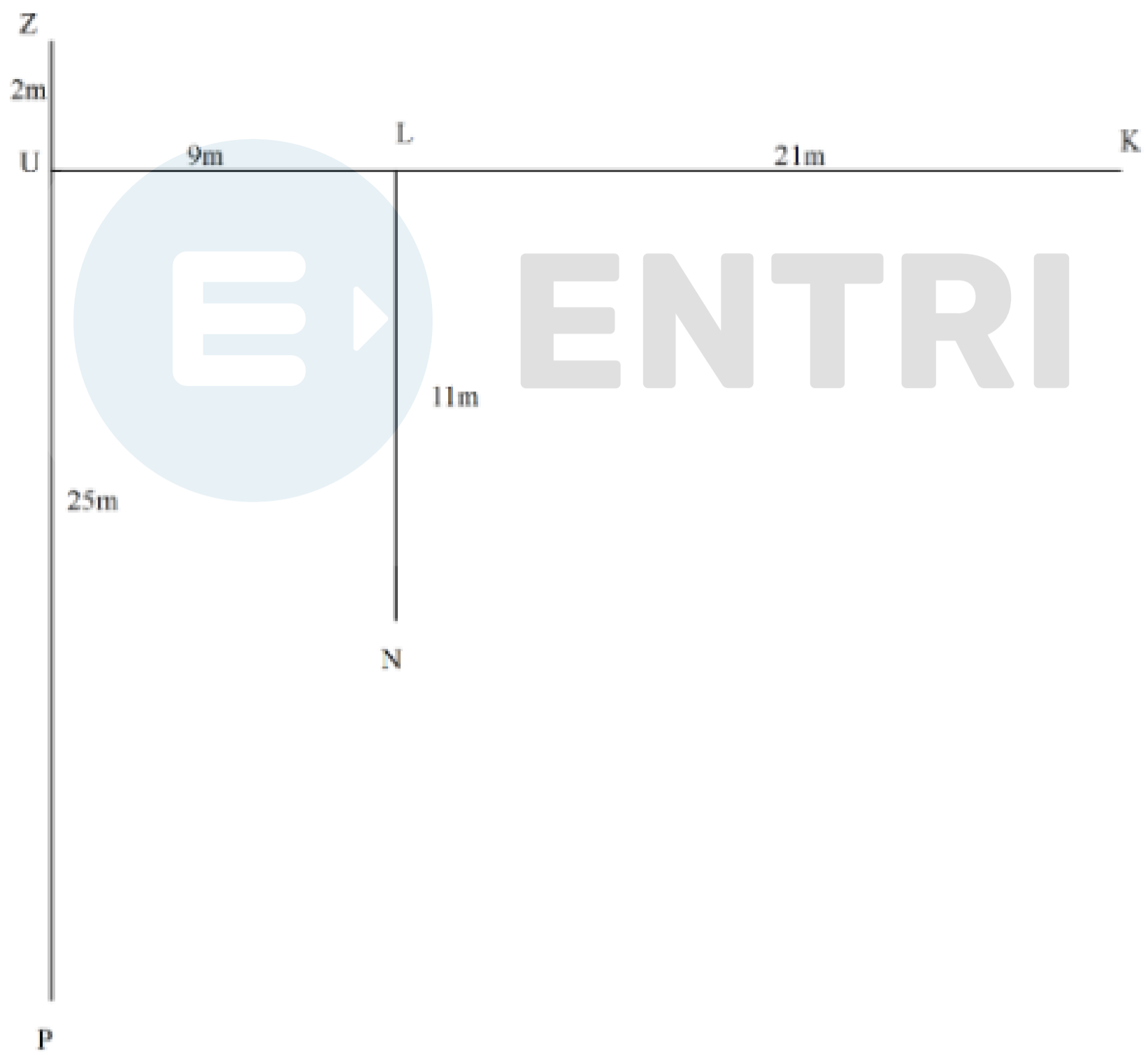
$U (+\%) 6L$ , means U is the son of L and is 9m west of L.



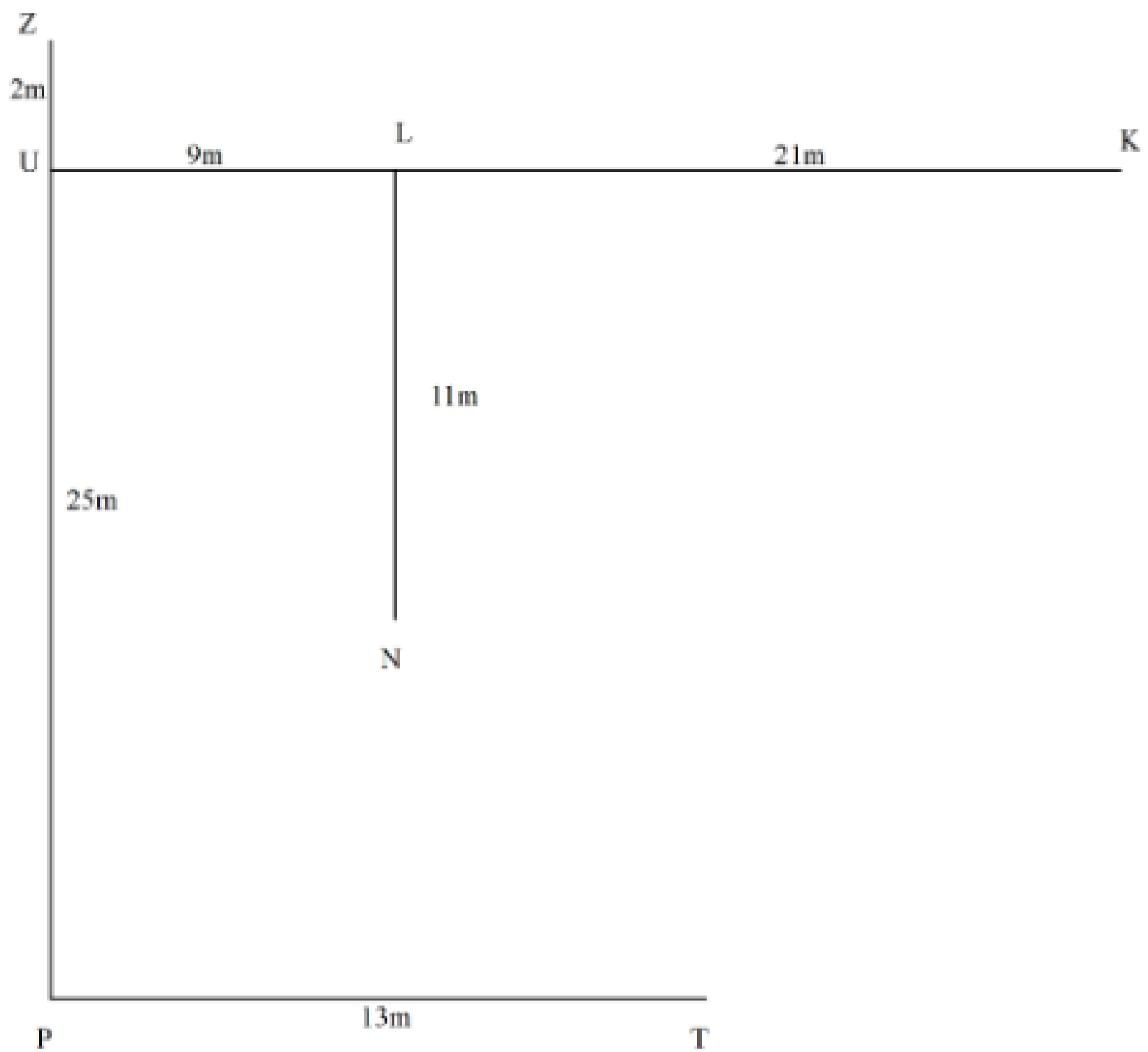
$P (*\#) 21 U$  means P is 25 m south of U and P is the wife of U.

$Z (>@) 8 U$  means Z is the daughter of U and is 2m north of U.

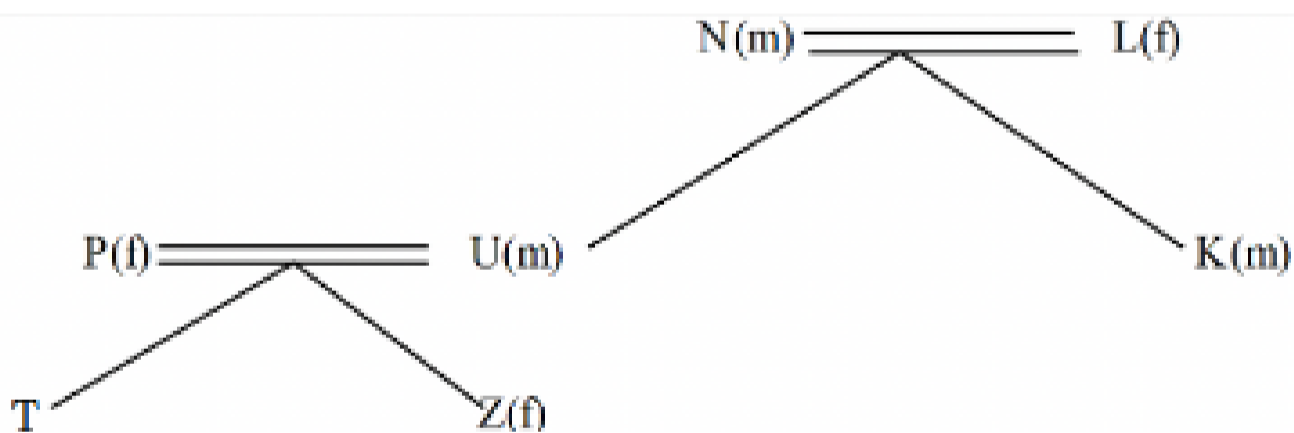




P (+&) 10 T means P is the mother of T and is 13m west of T.



Also we get:



All the above are same direction facing pair except PN.

**B. In which direction is U's brother with respect to P's father in law?**

- A North east**

**B** South east

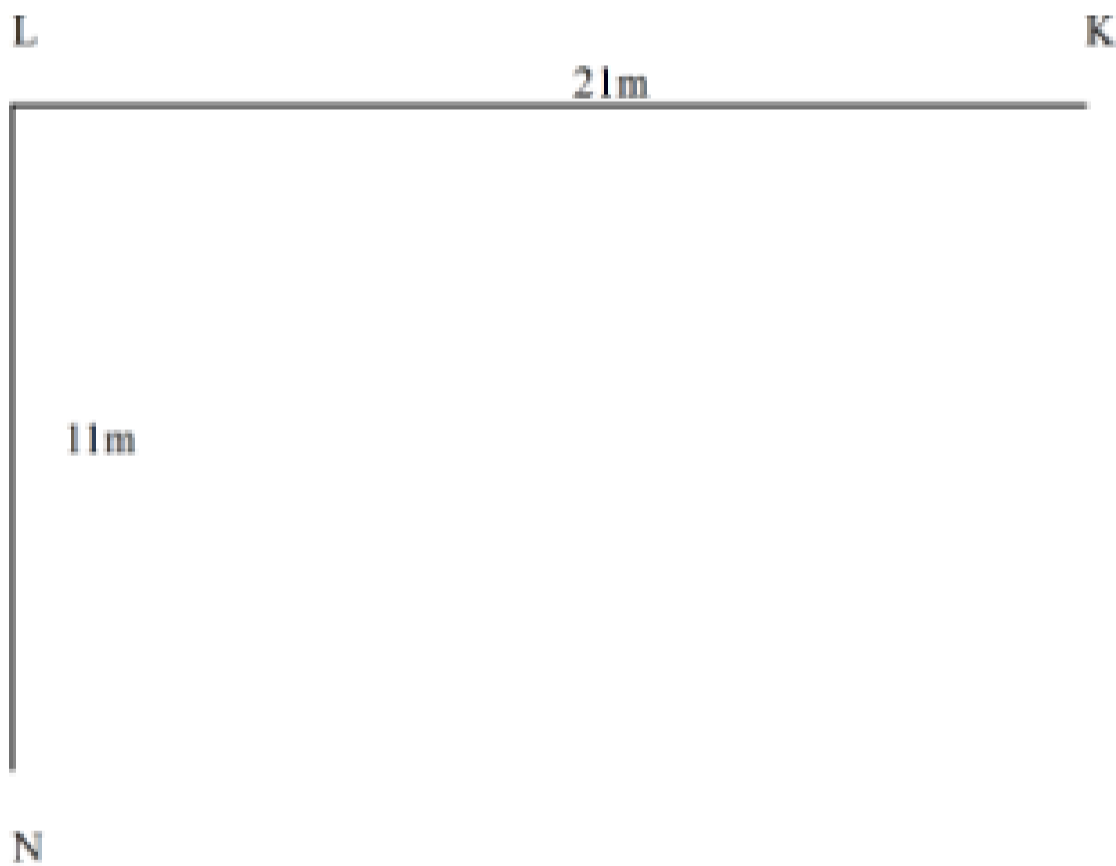
**C** West

**D** East

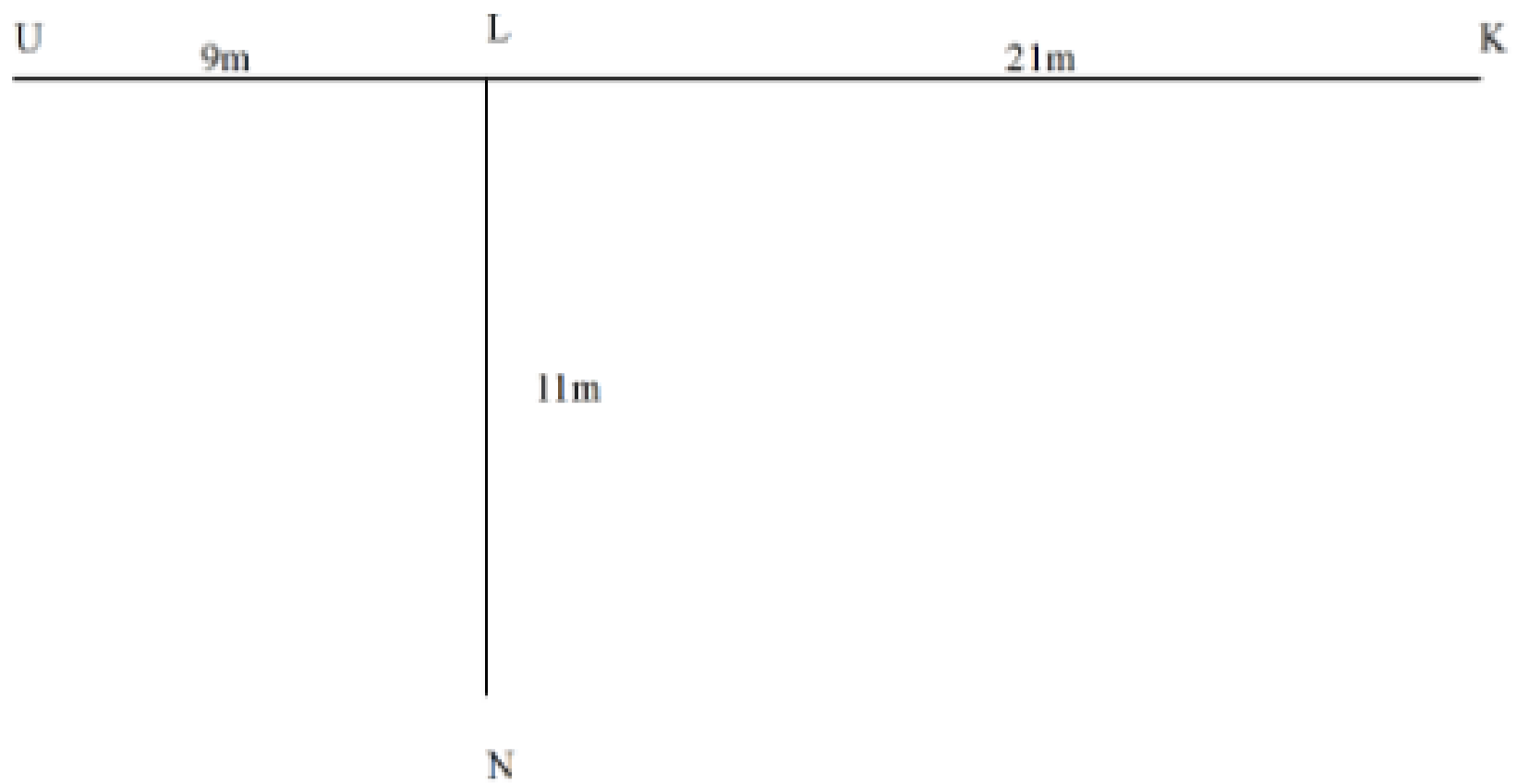
### Solution

$L \text{ } \# \text{ } 17 \text{ } N$ , means L is the wife of N and is 11 m north of N.

$K \text{ } \% \text{ } 23 \text{ } L$ , means K is the son of L and is 21m east of L.

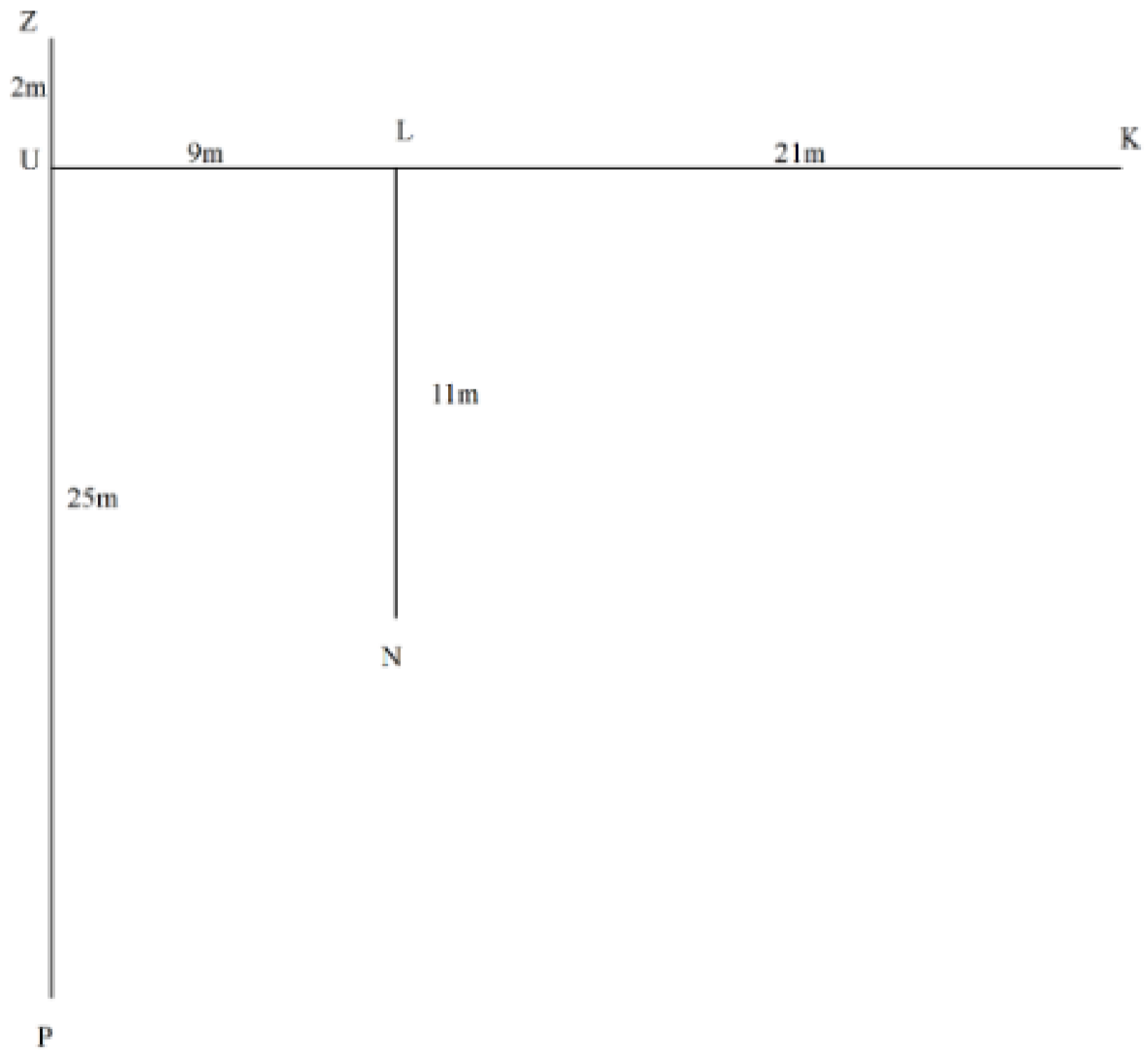


$U \text{ } (\% \text{ } ) \text{ } 6L$ , means U is the son of L and is 9m west of L.

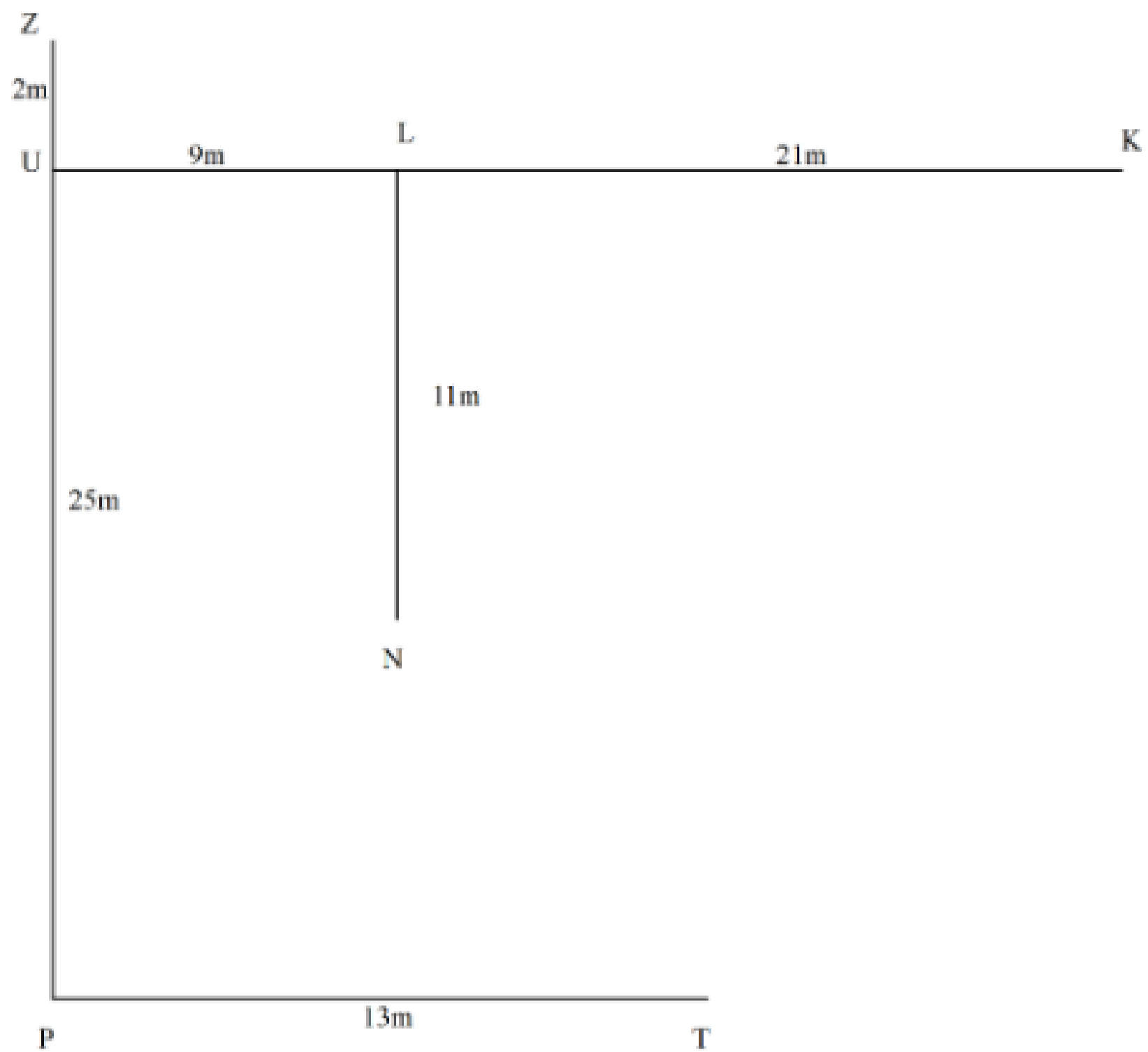


P (\*#) 21 U means P is 25 m south of U and P is the wife of U.

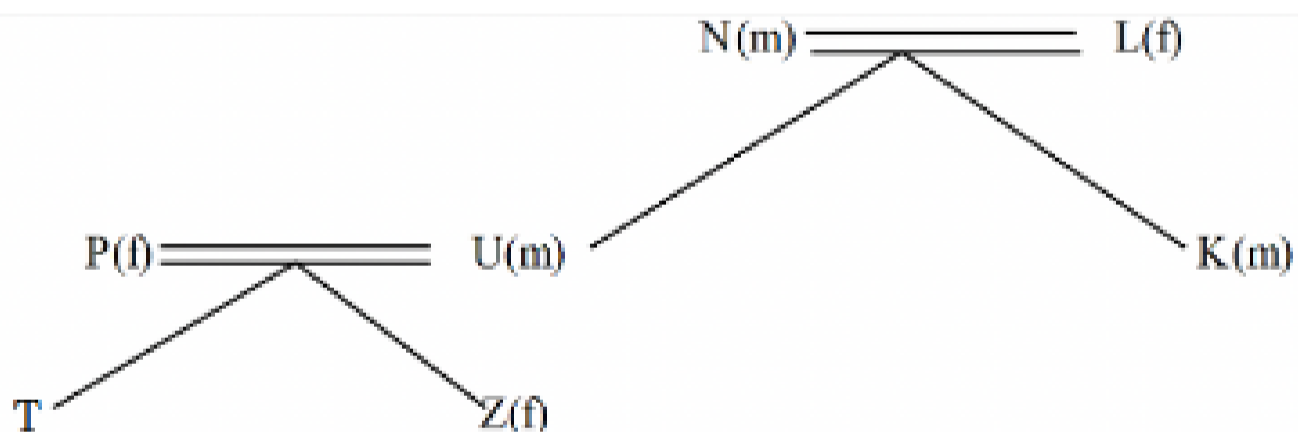
Z (>@) 8 U means Z is the daughter of U and is 2m north of U.



P (+&) 10 T means P is the mother of T and is 13m west of T.



Also we get:



U's brother (K) is in north east direction with respect to P's father in law (N).

**C. How is Z related to L?**

- A** Daughter in law

**B** Daughter

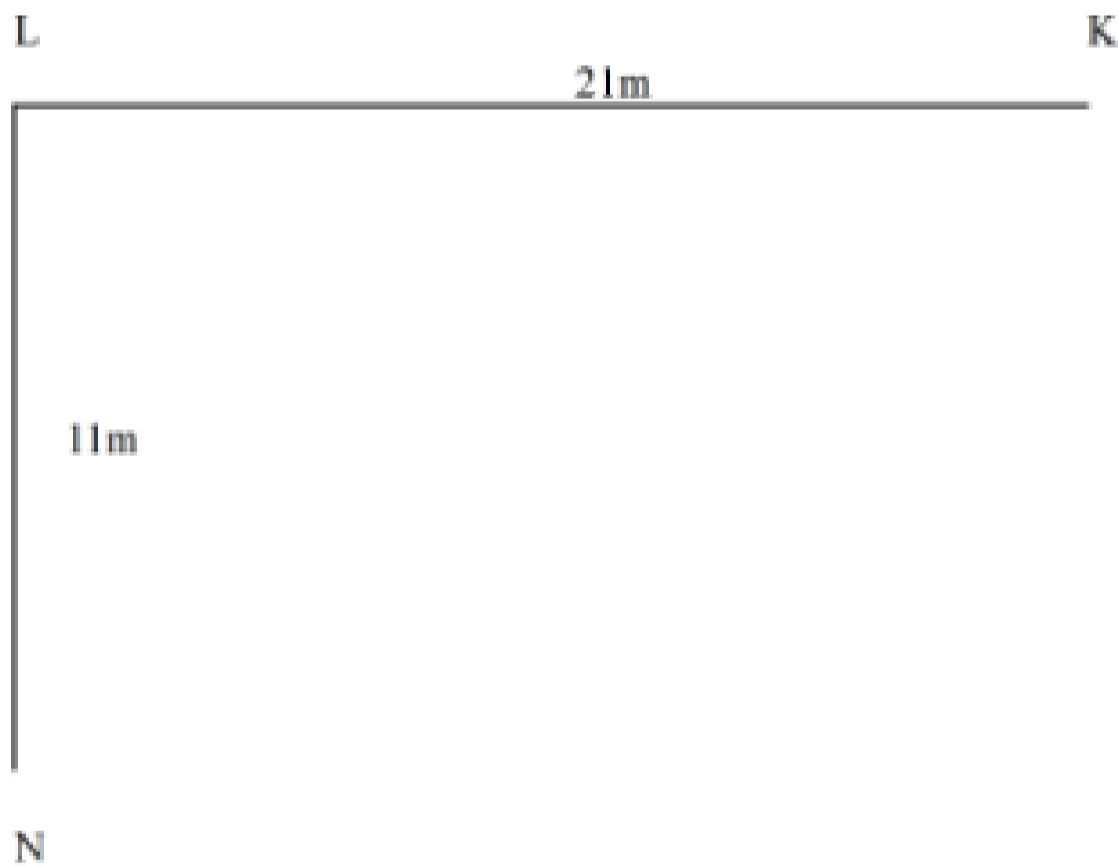
**C** Sister

**D** Granddaughter

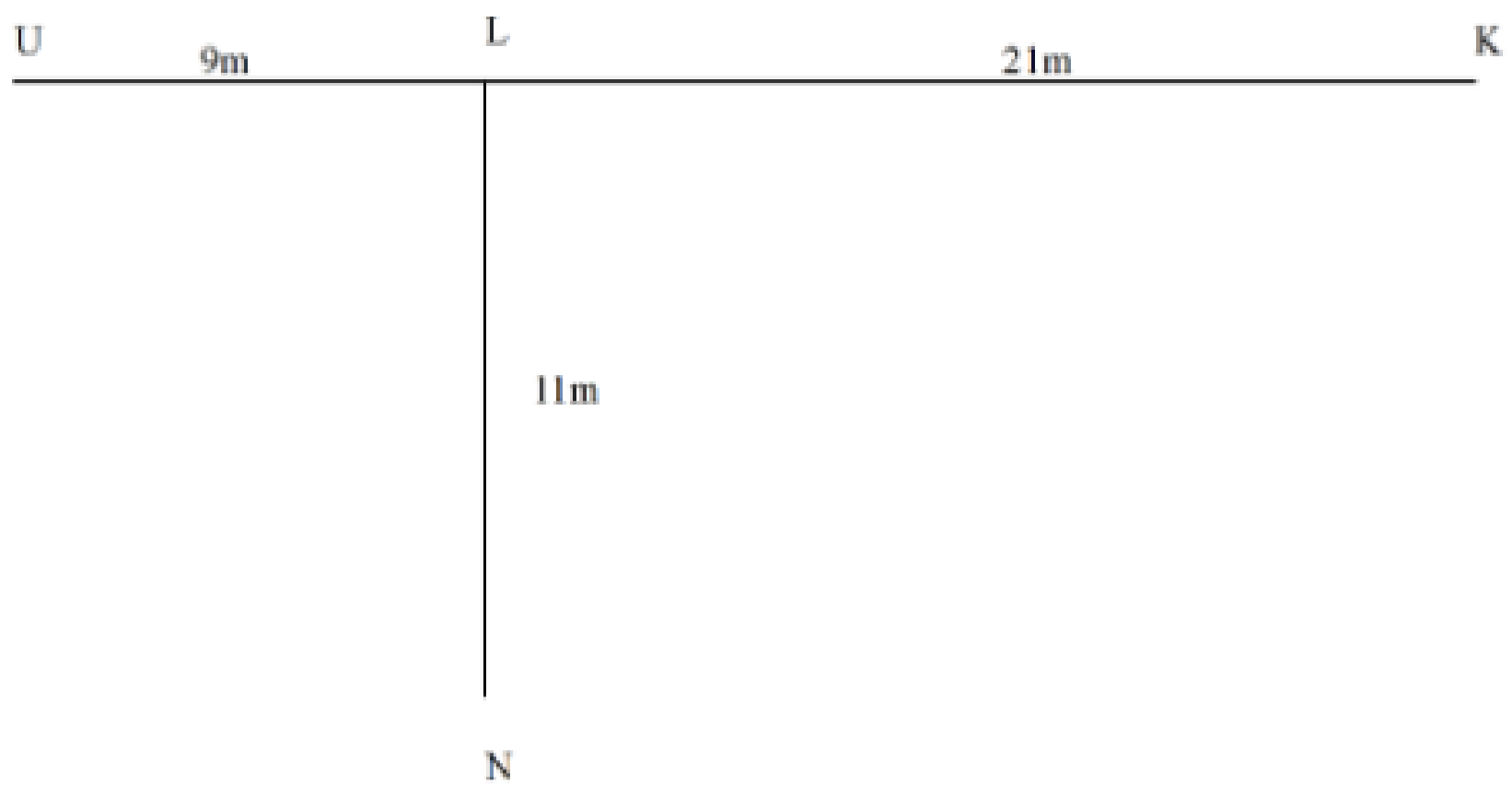
### Solution

$L \succ\# 17 N$ , means L is the wife of N and is 11 m north of N.

$K \prec\% 23 L$ , means K is the son of L and is 21m east of L.

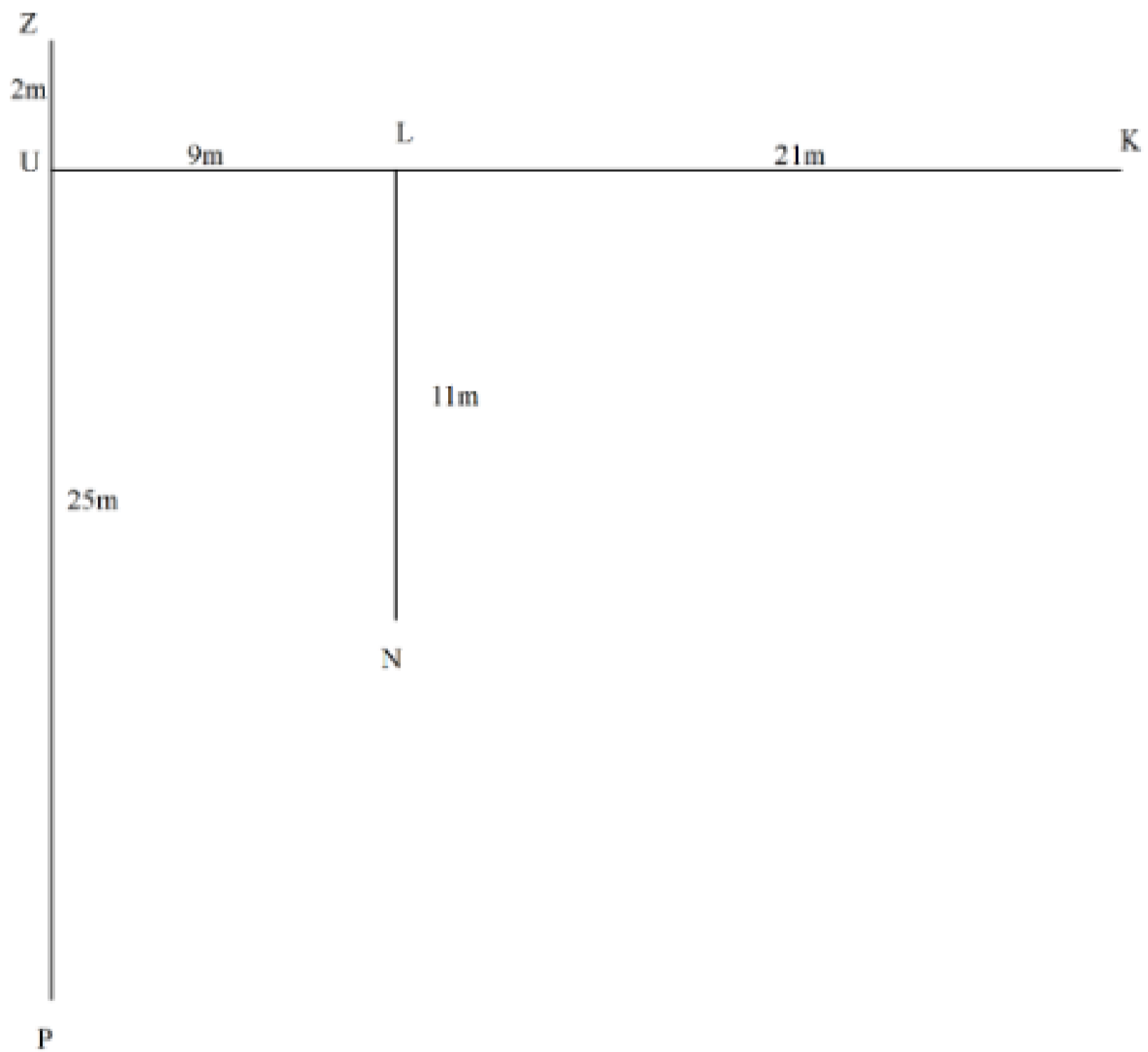


$U (+\%) 6L$ , means U is the son of L and is 9m west of L.

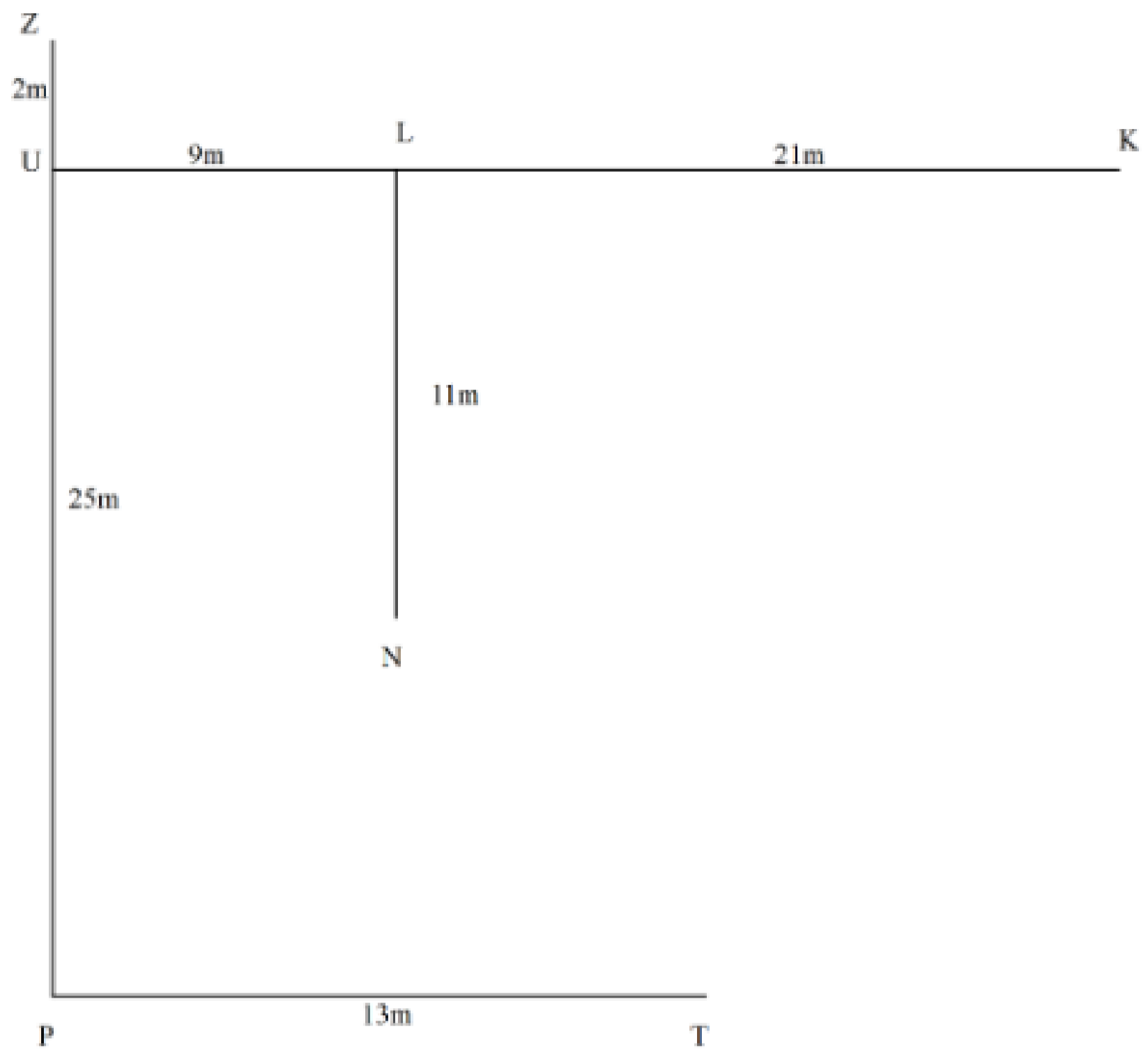


P (\*#) 21 U means P is 25 m south of U and P is the wife of U.

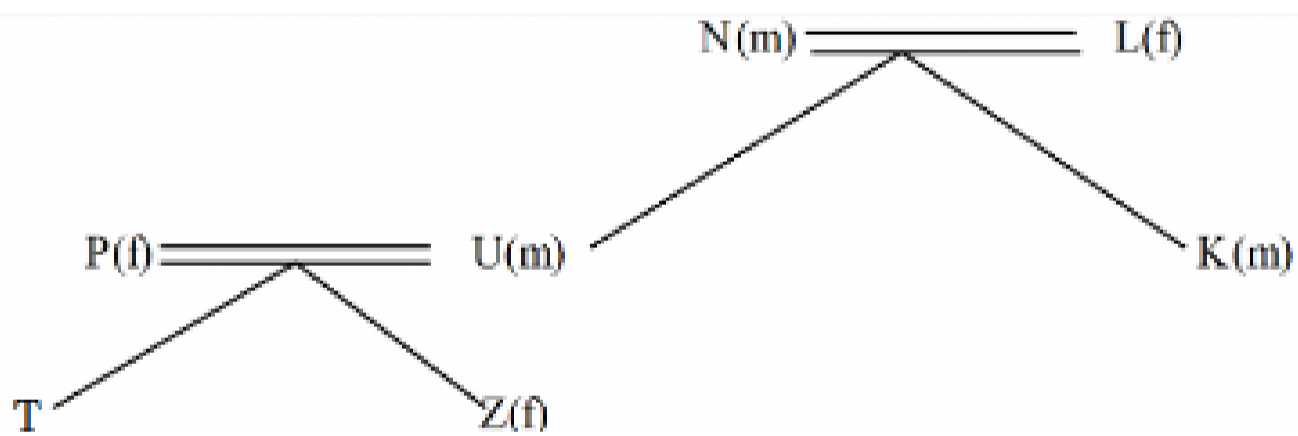
Z (>@) 8 U means Z is the daughter of U and is 2m north of U.



P (+&) 10 T means P is the mother of T and is 13m west of T.



Also we get:



Z is the granddaughter of L.



**21. Answer the questions based on the information given below:**

In a certain code language:

"For every minute happiness" is coded as "F21 C18 I19 E25"

"Make everyday little unique" is coded as "H25 F21 D13 F20"

"Success is not final" is coded as "C20 G21 E14 B19"

"Journey of travel will" is coded as "B15 D23 G25 F22"

**A. "G25" is the code of which of the following word?**

**A** Travel

**B** Final

**C** Will

**D** Journey

**Solution**

"For every minute happiness" is coded as "F21 C18 I19 E25"

"Make everyday little unique" is coded as "H25 F21 D13 F20"

"Success is not final" is coded as "C20 G21 E14 B19"

"Journey of travel will" is coded as "B15 D23 G25 F22"

A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)	H (8)	I (9)	J (10)	K (11)	L (12)	M (13)
Z (26)	Y (25)	X (24)	W (23)	V (22)	U (21)	T (20)	S (19)	R (18)	Q (17)	P (16)	O (15)	N (14)

Number:-

The logic of the number is the highest number representation of the letter in the word as per alphabetical order.

Example:- If 'T' is the highest alphabet in the word then the number will be '20'.

Letter:-

The letter is the alphabet of the number of letters in the word according to the alphabetical series.

Example:- If there are seven letters in the word then the alphabet will be 'G'.

For example:-

In the word 'Minute':-

Highest letter is 'U' thus the number will be 21.

Number of letters = 6

Thus, the alphabet is 'F'.

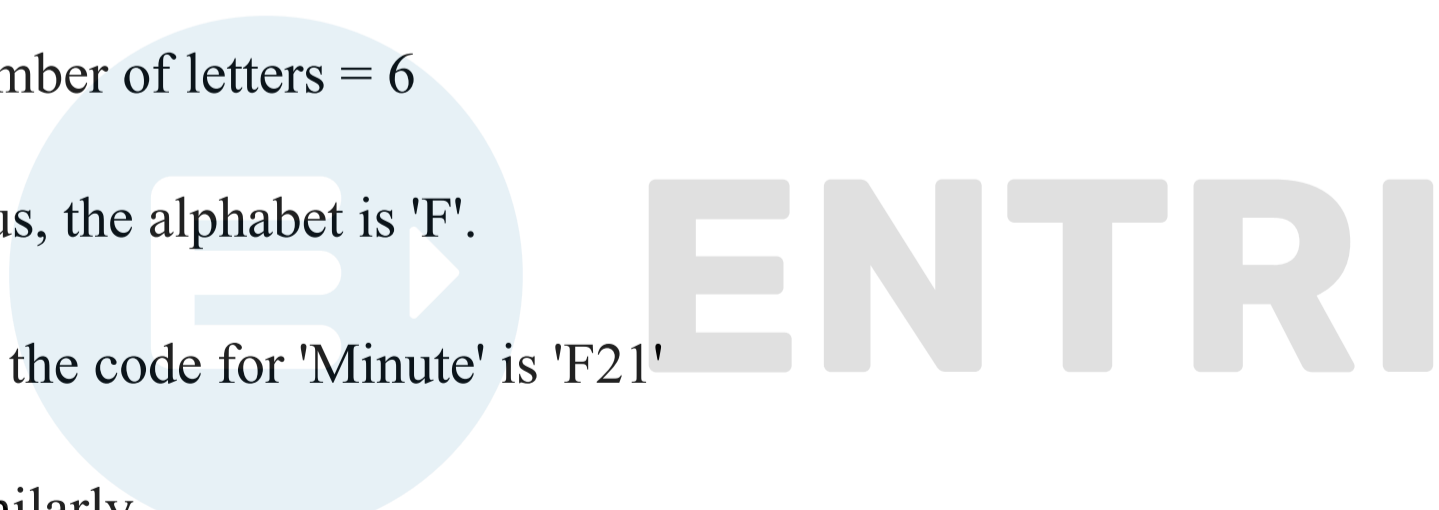
So, the code for 'Minute' is 'F21'

Similarly-

Code for 'For' = C18

Code for 'Every' = E25

Code for 'Happiness' = I19



Code for 'Make' = D13

Code for 'Everyday' = H25

Code for 'Little' = F20

Code for 'Unique' = F21

Code for 'Success' = G21

Code for 'Is' = B19

Code for 'Final' = E14

Code for 'Not' = C20

Code for 'Journey' = G25

Code for 'Of' = B15

Code for 'Travel' = F22

Code for 'Will' = D23

"G25" is the code of "Journey".

**B. What will be the code for the word "Happiness"?**

**A** F21

**B** C18

**C** I19

**Solution**

"For every minute happiness" is coded as "F21 C18 I19 E25"

"Make everyday little unique" is coded as "H25 F21 D13 F20"

"Success is not final" is coded as "C20 G21 E14 B19"

"Journey of travel will" is coded as "B15 D23 G25 F22"

A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)	H (8)	I (9)	J (10)	K (11)	L (12)	M (13)
Z (26)	Y (25)	X (24)	W (23)	V (22)	U (21)	T (20)	S (19)	R (18)	Q (17)	P (16)	O (15)	N (14)

**Number:-**

The logic of the number is the highest number representation of the letter in the word as per alphabetical order.

Example:- If 'T' is the highest alphabet in the word then the number will be '20'.

**Letter:-**

The letter is the alphabet of the number of letters in the word according to the alphabetical series.

Example:- If there are seven letters in the word then the alphabet will be 'G'.

**For example:-**

In the word 'Minute':-

Highest letter is 'U' thus the number will be 21.

Number of letters = 6

Thus, the alphabet is 'F'.

So, the code for 'Minute' is 'F21'

Similarly-

Code for 'For' = C18

Code for 'Every' = E25

Code for 'Happiness' = I19

Code for 'Make' = D13

Code for 'Everyday' = H25

Code for 'Little' = F20

Code for 'Unique' = F21

Code for 'Success' = G21

Code for 'Is' = B19

Code for 'Final' = E14

Code for 'Not' = C20

Code for 'Journey' = G25

Code for 'Of' = B15

Code for 'Travel' = F22

Code for 'Will' = D23

The code for the word "Happiness" is "I19".

C. What will be the code for "Worst before success"?

**A** E23 F18 G21

**B** D17 E14 I19

**C** F18 C20 H25

**D** K16 E23 B14

### Solution

"For every minute happiness" is coded as "F21 C18 I19 E25"

"Make everyday little unique" is coded as "H25 F21 D13 F20"

"Success is not final" is coded as "C20 G21 E14 B19"

"Journey of travel will" is coded as "B15 D23 G25 F22"

A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)	H (8)	I (9)	J (10)	K (11)	L (12)	M (13)
Z (26)	Y (25)	X (24)	W (23)	V (22)	U (21)	T (20)	S (19)	R (18)	Q (17)	P (16)	O (15)	N (14)

Number:-

The logic of the number is the highest number representation of the letter in the word as per alphabetical order.

Example:- If 'T' is the highest alphabet in the word then the number will be '20'.

Letter:-

The letter is the alphabet of the number of letters in the word according to the alphabetical series.

Example:- If there are seven letters in the word then the alphabet will be 'G'.

For example:-

In the word 'Minute':-

Highest letter is 'U' thus the number will be 21.

Number of letters = 6

Thus, the alphabet is 'F'.

So, the code for 'Minute' is 'F21'

Similarly-

Code for 'For' = C18

Code for 'Every' = E25

Code for 'Happiness' = I19

Code for 'Make' = D13

Code for 'Everyday' = H25

Code for 'Little' = F20

Code for 'Unique' = F21

Code for 'Success' = G21

Code for 'Is' = B19

Code for 'Final' = E14

Code for 'Not' = C20

Code for 'Journey' = G25

Code for 'Of' = B15

Code for 'Travel' = F22

Code for 'Will' = D23

Code for 'Success' = G21

In the word 'Worst'-

Highest letter is 'W' thus the number will be '23'.

Number of letters = 5

Thus, the alphabet is 'E'.

So, the code for 'Worst' is 'E23'.

In word 'Before'-

Highest letter is 'R' thus the number will be 18.

Number of letters = 6

Thus, the alphabet is 'F'.

So, the code for 'Before' is 'F18'

Thus, the code for 'Worst before success' will be 'E23 F18 G21'.



Select the related word from the given alternative.

22. Judge : Justice :: Arbitrator : ?

**A** Resolve

**B** Analysis

**C** Treatment

**D** Teach

**Solution**

Judge is related to Justice and Arbitrator resolves the matter.

Hence, option a.

In the following letter set, the second letter set is related to the first letter set in a certain way, find the letter set from the options which is related to the third letter set in the same way.

23. BPTZ: DQRY :: ROCK: ?

A PTJB

B TMNJ

C RDSP

D TPAJ

### Solution

For BPTZ: DQRY,

$$B + 2 = D$$

$$P + 1 = Q$$

$$T - 2 = R$$

$$Z - 1 = Y$$

Similarly,

$$R + 2 = T$$

$$O + 1 = P$$

$$C - 2 = A$$

$$K - 1 = J$$

So, we have,

BPTZ: DQRY:: ROCK: TPAJ

Hence, option d.

24. Among the following options, three of them are alike in a certain way.  
Find the odd one out:

A FIKO

B BEGK

C PSWY

D LOQU

### Solution

Option (a):  $F + 3 = I$ ,  $I + 2 = K$ ,  $K + 4 = O$

Option (b):  $B + 3 = E$ ,  $E + 2 = G$ ,  $G + 4 = K$

Option (c):  $P + 3 = S$ ,  $S + 4 = W$ ,  $W + 2 = Y$

Option (d):  $L + 3 = O$ ,  $O + 2 = Q$ ,  $Q + 4 = U$

Hence, option c.

25. Unjumble the given jumbled words and then select the odd one out?

A EGROAN

B YHRCER

C SPEALP

D ANRSUU

### Solution

Given that,

EGROAN - ORANGE

YHRCER - CHERRY

SPEALP - APPLES

ANRSUU- URANUS

So, among all are fruits except URANUS.

Hence, option d.

26. Fill in the blanks:

Y, Z, T, X, O, V, J, , , R

**A** T, E

**B** S, F

**C** T, D

**D** S, E

### Solution

Y, Z, T, X, O, V, J, , , R

Observe the alternate letters, i.e. Y, T, O, J and Z, X, V

$$Y - 5 = T, T - 5 = O, O - 5 = J, J - 5 = E$$

$$Z - 2 = X, X - 2 = V, V - 2 = T, T - 2 = R$$

The letters will be T, E

Hence, option a.

27. Which of the following pair replaces? in series given.

**TXC, QVG, ?, KRO, HPS**

**A** MSK

**B** NTK

**C** NSL

**D** OTK

### **Solution**

Given series

TXC, QVG, ?, KRO, HPS

$T - 3 = Q, Q - 3 = N, N - 3 = K, K - 3 = H$

$X - 2 = V, V - 2 = T, T - 2 = R, R - 2 = P$

$C + 4 = G, G + 4 = K, K + 4 = O, O + 4 = S.$

Hence, option b.

28. A series is given with one term missing. Choose the correct alternatives from the given ones that will complete the series.

11, 12, 26, 81, 328, ?, 9876

A 1540

B 1645

C 1640

D 1545

### Solution

The logic followed here is:

$$11 \times 1 + 1 = 11 + 1 = 12$$

$$12 \times 2 + 2 = 24 + 2 = 26$$

$$26 \times 3 + 3 = 78 + 3 = 81$$

$$81 \times 4 + 4 = 324 + 4 = 328$$

$$328 \times 5 + 5 = 1640 + 5 = 1645$$

$$1645 \times 6 + 6 = 9870 + 6 = 9876$$

'1645' will complete the series:



The complete series is:

11, 12, 26, 81, 328, 1645, 9876

29. Select the letter combination that is placed sequentially on the blank spaces of the letter series given below to complete the given series.

hi\_t\_ry\_istor\_h\_s\_ory

A oshyit

B yitsoh

C sohyit

D soithy

### Solution

- Here, the 'history' is written three times.
- history | history | history
- Hence, option c is the correct answer.

30. Select the word, which cannot be formed using the letters of the given word?

**SEGREGATION**

**A** EAGER

**B** NATION

**C** GATE

**D** GATE

**Solution**

By using the letters of given word, word NATION cannot be formed because in the given word, letter N is used only once.

B is the correct answer.

31. In the following question, select the word which cannot be formed using the letters of the given word. **QUALIFICATION**

**A** LIAR

**B** FIAT

**C** LION

**D** FICTION

**Solution**

‘LIAR’, There is no. ‘R’ in the given word.



(<https://www.entri.me>)



(<https://play.google.com/store/apps/details?id=me.entri.entri.me>)