

Deduction

All Poverty-stricken people suffer from multiple physical illnesses.
All people with multiple physical illnesses are displeased with their life.

People pleased with their life are not poverty-stricken.

A = poverty-stricken people, B = people who suffer from multiple physical illnesses, $\sim C$ = people displeased with their life.

According to the premises: all A \rightarrow B and all B $\rightarrow \sim C$. This also means all A $\rightarrow \sim C$.

The conclusion states all C (people pleased with their life) $\rightarrow \sim A$, which equals A $\rightarrow \sim C$. Remember the NOT Triangle: A generalizing statement (all A \rightarrow are B) is logically equivalent to the transposed negative formulation of the same statement (all not B \rightarrow are not A).

In other words:

You know for a fact that every person who is Poverty-stricken is also displeased with their life. Therefore, there could be no scenario in which someone pleased with their life is also Poverty-stricken.

See the Venn diagram for reference (poverty stricken people = PSP, suffer from multiple physical illnesses = SMPI, displeased with their life = DL).

Deduction

All Poverty-stricken people suffer from multiple physical illnesses.
All people with multiple physical illnesses are displeased with their life.

Some poverty-stricken people are displeased with their life.

Conclusion follows.

A = poverty-stricken people, B = people who suffer from multiple physical illnesses, $\sim C$ = people displeased with their life.
According to the premises: all $A \rightarrow B$, and all $B \rightarrow \sim C$, which also means $A \rightarrow \sim C$.

The conclusion states $A_{\text{some}} \rightarrow \sim C$, which follows from $A \rightarrow \sim C$, because if all $A \rightarrow \sim C$, then $A_{\text{some}} \rightarrow \sim C$ (remember that “some” means at least one, perhaps more than one, and possibly all).

In other words:

You know for a fact that every person who is Poverty-stricken is also displeased with their life. Therefore, at least some Poverty-stricken people are displeased with their life.
See the Venn diagram for reference (poverty stricken people = PSP, suffer from multiple physical illnesses = SMPI, displeased with their life = DL).

Note: If you are familiar with formal logic tests, you may have chosen “conclusion does not follow” as the correct answer, because no premise indicated existence. However, unlike in most formal-logic tests, in the Watson-Glaser test, **you are allowed to assume the existence of groups described in generalizing statements.**

Deduction

All Poverty-stricken people suffer from multiple physical illnesses.
All people with multiple physical illnesses are displeased with their life.

People displeased with their life must be poverty stricken.

Conclusion does not follow.

A = poverty-stricken people, B = people who suffer from multiple physical illnesses, $\sim C$ = people displeased with their life.
According to the premises: all $A \rightarrow B$, and all $B \rightarrow \sim C$, which also means $A \rightarrow \sim C$.

The conclusion states all $\sim C \rightarrow A$.

When you compare the conclusion to the combination of the two premises, you can see the NOT Triangle does not apply, because there was only one operation: transposing. Therefore, the two statements are not equivalent: $A \rightarrow \sim C$ does not equal $\sim C \rightarrow A$.

Deduction

All Stand-up comedians are optimistic. If you are a violinist, then you must be optimistic.

If you are not optimistic, then you are neither a violinist nor a Stand-up comedian.

A = stand-up comedians, B = optimistic, C = violinists.

According to the premises, all A \rightarrow B, and if C \rightarrow B, which equals all A + all C \rightarrow B.

The conclusion states that, if $\sim B \rightarrow \sim A + \sim C$. Comparing this to the combination of the premises, you can see two operations were used: negating and transposing. This means, according to the NOT Triangle, the meaning did not change. Therefore, the conclusion follows.

In other words:

If all stand-up comedians and violinists are optimistic, then no non-optimistic people can be stand-up comedians or violinists.
See the Venn diagram for reference (stand-up comedians = S, violinists = V, optimistic = O).

*Note that the premises do not indicate whether there is an overlap between the stand-up comedians and the violinists.

Deduction

All Stand-up comedians are optimistic. If you are a violinist, then you must be optimistic.

If you are optimistic, then you are a Stand-up comedian or a violinist.

Conclusion does not follow.

A = stand-up comedians, B = optimistic, C = violinists.

According to the premises, all A \rightarrow B, and if C \rightarrow B, which equals all A + all C \rightarrow B.

The conclusion states if B \rightarrow A or C.

Note that the directionality in the conclusion is reversed to that in the premises, and when directionality of condition and outcome are reversed, the new statement is not equivalent and cannot be inferred from the original.

Deduction

All Stand-up comedians are optimistic. If you are a violinist, then you must be optimistic.

All optimistic violinists are Stand-up comedians.

Conclusion does not follow.

A = stand-up comedians, B = optimistic, C = violinists.

According to the premises, all $A \rightarrow B$, and if $C \rightarrow B$, which equals all $A + \text{all } C \rightarrow B$.

The conclusion states all $(B+C) \rightarrow A$.

This statement is not a manipulation of the premises.

Deduction

All Stand-up comedians are optimistic. If you are a violinist, then you must be optimistic.

There are optimistic people who are both violinists and stand-up comedians.

Conclusion does not follow.

A = stand-up comedians, B = optimistic, C = violinists.

According to the premises, all A \rightarrow B, and if C \rightarrow B, which equals all A + all C \rightarrow B.

The conclusion states (B + A + C)*.

The conclusion discusses a group of people who are both violinists and stand-up comedians, while the premises discussed them separately. Just because both groups are optimistic does not mean there is an overlap between them.

Deduction

All Stand-up comedians are optimistic. If you are a violinist, then you must be optimistic.

All stand-up comedians not playing the violin are optimistic.

Conclusion follows.

A = stand-up comedians, B = optimistic, C = violinists.

According to the premises, all A \rightarrow B, and if C \rightarrow B, which is equivalent to all A + all C \rightarrow B.

The conclusion states all (A + \sim C) \rightarrow B.

If A \rightarrow B, then it does not matter which other adjectives are added to A. You do not know whether there are A that are also C, but it does not matter, because you know all A \rightarrow B.

Deduction

Some citizens pay taxes. Many citizens receive income support.

More citizens receive income support than citizens who pay taxes.

Conclusion does not follow.

Citizens = A, pay taxes = B, receive income support = C.
According to the premises, (A+B)some, and (A+C)many.

The conclusion states (A+B) \rightarrow \sim C.

This statement is not a manipulation of the premises.

In Logic tests, "some" may refer to 1 citizen, several citizens, and even all citizens. While "many" may refer to at least 2 citizens, and possibly all. "Some" and "many" can fill the same purposes in most cases. Therefore, we cannot conclude that "many" is more than "some".

Deduction

Some citizens pay taxes. Many citizens receive income support.

There is possibly only one tax payer and only one income support taker.

Conclusion does not follow.

Citizens = A, pay taxes = B, receive income support = C.

According to the premises, $(A+B)^{\text{some}}$, and $(A+C)^{\text{many}}$.

The conclusion states that possible $(A+B)^{\text{single}}$ AND $(A+C)^{\text{single}}$.

Deduction

Some citizens pay taxes. Many citizens receive income support.

Tax payers and income support takers are citizens.

Conclusion does not follow.

Citizens = A, pay taxes = B, receive income support = C.
According to the premises, $(A+B)^{\text{some}}$, and $(A+C)^{\text{many}}$.

The conclusion states B and C \rightarrow A.

Describing a group with no quantifier, as the conclusion does, is to describe the entire group. "Tax payers and income support takers are citizens" equals "all Tax payers and income support takers are citizens." However, the premises said nothing about tax payers or income supported as a group – it only discussed its relation to the citizen group. Therefore, it cannot be concluded that all Tax payers and income support takers are citizens.

Deduction

Some citizens pay taxes. Many citizens receive income support.

Some tax payers and some income support takers have citizenship.

Conclusion follows.

Citizens = A, pay taxes = B, receive income support = C.

According to the premises, $(A+B)^{\text{some}}$, and $(A+C)^{\text{many}}$.

The conclusion states $(B+A)^{\text{some}}$, and $(C+A)^{\text{many}}$.

If it is known that some A are B, then the transposing of the sentence – some B are A – can be inferred.

Deduction

You are nervous if you are stuck in traffic. Everyone stuck in traffic is anxious.

If you are not anxious, then you are not nervous.

Conclusion does not follow.

Stuck in traffic = A, nervous = B, anxious = C.

According to the premises, if $A \rightarrow B$, and every $A \rightarrow C$, which also means $A \rightarrow B + C$.

The conclusion states $\sim C \rightarrow \sim B$.

Nothing in the premises provides you with information on how and whether C affects B, only that they are both caused by A. Therefore, the conclusion does not follow.

Deduction

You are nervous if you are stuck in traffic. Everyone stuck in traffic is anxious.

If you are stuck in traffic, you are both anxious and nervous.

Conclusion follows.

Stuck in traffic = A, nervous = B, anxious = C.

According to the premises, if $A \rightarrow B$, and every $A \rightarrow C$, which also means $A \rightarrow B + C$.

The conclusion states $A \rightarrow B + C$.

The conclusion is the combination of the two premises; therefore, it follows.

Deduction

All Real Estate assets are either very large or located in central areas but not both. While no apartment is without air-conditioning, all air-conditioned RE assets are substantial.

RE Assets that are located in central areas are not apartments.

Conclusion follows.

Real-estate assets = A, very large = B, located in a central area = C, apartment = D, air conditioning = E.
According to the premises, $(A \rightarrow B/C)$, $(\text{no } D \rightarrow \sim E)$, which means $(D \rightarrow E)$, and $(A+E \rightarrow B)$.

The conclusion states $(A + C \rightarrow \sim D)$.

If $(A+E \rightarrow B)$, and $(D \rightarrow E)$, then $(D \rightarrow B)$ (because D is a subgroup of A). And since $(A \rightarrow B/C)$, every A that is not B but C cannot be D.

Deduction

All Real Estate assets are either very large or located in central areas but not both. While no apartment is untrendy, all trendy RE assets are very large.

Trendy real estate assets are either located in non-central areas or are small.

Real-estate assets = A, very large = B, located in a central area = C, apartment = D, trendy = E.
According to the premises, $(A \rightarrow B/C)$, $(\text{no } D \rightarrow \sim E)$, which means $(D \rightarrow E)$, and $(A+E \rightarrow B)$.

The conclusion states $(E \rightarrow \sim C/\sim B)$.

You are told in the second premise that all trendy RE assets are very large. That means all trendy RE assets must be located in non-central areas. Since the conclusion allows for a scenario in which all trendy RE assets are located in non-central areas, the conclusion follows.

Remember that “either A – or B” means all items must either be A or B but not both and not neither. It is possible for all items to be A or for all items to be B.