

1 Propositional Logic

List of questions and answers for propositional logic.

1.1 Propositional Logic - Causal Chains

“If A causes B. Does A cause B?”	
GPT-4	Yes, if A causes B, then A does indeed cause B.
GPT-3	There is no definitive answer to this question as it depends on the specific situation. In some cases, A may cause B, while in others A may not have any direct impact on B.
Luminous A:	The answer is yes. <i>[continued]</i>
OPT	<i>[empty]</i>

“If A causes B and B causes C. Does A cause C?”	
GPT-4	Yes, in a sense, A does cause C indirectly through B. This is known as a causal chain. However, the relationship may not be as strong or direct as the relationship between A and B or B and C. Other factors could also influence
GPT-3	It is possible that A causes C, but it is also possible that A and C are unrelated.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B and B causes C, then A causes C. If A causes B and B causes C, then A does not cause C. <i>[continued]</i>

“If A causes B, B causes C and C causes D. Does A cause D?”	
GPT-4	Indirectly, yes. A causes B, which in turn causes C, which then causes D. So, A is an indirect cause of D. However, it’s important to note that this is a simplified explanation and in real situations, there
GPT-3	A causes D.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B, B causes C and C causes D. Does A cause D? If A causes B, B causes C and C causes D. Does A cause D? <i>[repeating]</i>
“If A causes B, B causes C, C causes D and D causes E. Does A cause E?”	
GPT-4	Yes, in a chain of causality, A would indirectly cause E.
GPT-3	A causes E.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B, B causes C, C causes D and D causes E. Does A cause E? If A causes B, B causes C, C causes D and D causes E. Does A cause E <i>[repeating]</i>
“If A causes B, B causes C, C causes D, D causes E, E causes F. Does A cause F?”	
GPT-4	Yes, in a chain of causality, A would indirectly cause F.
GPT-3	A does not necessarily cause F.
Luminous A:	The answer is yes. <i>[continued]</i>
OPT	If A causes B, B causes C, C causes D, D causes E, E causes F, then A causes F. If A causes B, B causes C, C causes D, <i>[repeating]</i>

“If A causes B, B causes C, C causes D, D causes E, E causes F, F causes G. Does A cause G?”	
GPT-4	Yes, A indirectly causes G because each event is a consequence of the previous one. This is known as a causal chain. However, it’s important to note that this doesn’t mean A is the only cause of G. There could be other factors
GPT-3	A does not necessarily cause G.
Luminous A:	The answer is yes. <i>[continued]</i>
OPT	The answer is no. The reason is that the causal chain is not closed. <i>[continued]</i>
“If A causes B, B causes C, C causes D, D causes E, E causes F, F causes G, G causes H. Does A cause H?”	
GPT-4	Yes, A causes H indirectly through a chain of events.
GPT-3	A causes H.
Luminous A:	The answer is yes. <i>[continued]</i>
OPT	The answer is no. The reason is that the causal chain is not closed. <i>[continued]</i>
“If A causes B, B causes C, C causes D, D causes E, E causes F, F causes G, G causes H, H causes I. Does A cause I?”	
GPT-4	Yes, A indirectly causes I through a chain of events.
GPT-3	A does not necessarily cause I, although it is a possibility.
Luminous A:	The answer is yes. <i>[continued]</i>
OPT	The answer is no. The reason is that the causal chain is not closed. <i>[continued]</i>

“If A causes B, B causes C, C causes D, D causes E, E causes F, F causes G, G causes H, H causes I, I causes J. Does A cause J?”	
GPT-4	Yes, A indirectly causes J through a chain of events.
GPT-3	A causes J.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	The answer is no. The reason is that the causal chain is not closed. <i>[continued]</i>

1.2 Propositional Logic - Sub chains

“If A causes B and B causes C. Does A cause B?”	
GPT-4	Yes, as per the initial statement, A causes B.
GPT-3	There is not enough information to answer this question.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B and B causes C, then A causes C. If A causes B and B does not cause C, then A does not cause C. <i>[repeating]</i>

“If A causes B and B causes C. Does B cause C?”	
GPT-4	Yes, B causes C.
GPT-3	Yes, B causes C.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B and B causes C, then A causes C. If A causes B and B causes C, then A does not cause C. <i>[continued]</i>

“If A causes B and B causes C. Does A cause A?”	
GPT-4	No, A causing B and B causing C does not imply that A causes A. The causality chain described does not involve A causing itself.
GPT-3	A does not cause A.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B and B causes C, then A causes C. If A causes B and B causes C, then A does not cause C. <i>[continued]</i>
“If A causes B, B causes C, C causes D, D causes E, E causes F. Does B cause E?”	
GPT-4	No, B does not directly cause E. B causes C, which then leads to a chain of events resulting in E, but B does not directly cause E.
GPT-3	There is no definitive answer to this question as the relationship between B and E could be indirect.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B, B causes C, C causes D, D causes E, E causes F. Does B cause E? - <i>[continued]</i>

1.3 Propositional Logic - Randomized Variable

“If A causes B and B causes C. Does B cause A?”	
GPT-4	No, B does not cause A. The causality flows from A to B to C, not the other way around.
GPT-3	There is no definitive answer to this question as it depends on the specific situation. In some cases, B may cause A, while in others A may cause B.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B and B causes C, then A causes C. If A causes B and B causes C, then A does not cause C. <i>[continued]</i>

“If A causes B and B causes C. Does C cause A?”	
GPT-4	No, C causing A would create a circular argument, which is not necessarily true. The relationship between A, B, and C is unidirectional in this context, meaning it goes in one direction only: from A to B to C. It
GPT-3	There is no definitive answer to this question as it depends on the specific situation. In some cases, it may be true that C causes A, while in other cases it may not be true.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B and B causes C, then A causes C. If A causes B and B causes C, then B causes C. <i>[continued]</i>
“If A causes B, B causes C, C causes D, D causes E, E causes F. Does E cause B?”	
GPT-4	No, E does not cause B. The sequence of causation goes from A to F, not the other way around.
GPT-3	There is no definitive answer to this question as it depends on the specific circumstances of the situation. However, it is possible that E could cause B if, for example, E is a necessary component for the functioning of B.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B, B causes C, C causes D, D causes E, E causes F. Does E cause B? If A causes B, B causes C, C causes D, <i>[repeating]</i>
“If B causes C and A causes B. Does A cause C?”	
GPT-4	Yes, in a logical sense, if A causes B and B causes C, then A does cause C. This is known as a causal chain.
GPT-3	There is not enough information to determine if A causes C.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B, then A causes C. If A causes B, then C causes B. <i>[continued]</i>

“If B causes C and A causes B. Does C cause A?”	
GPT-4	No, C does not necessarily cause A. The causality chain goes from A to B to C, not the other way around. However, in some systems or situations, there might be a feedback loop where C influences A, but this is not
GPT-3	There is no definitive answer to this question as it depends on the specific situation. In some cases, it may be true that C causes A, while in other cases it may not be true.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If A causes B, then C causes A. If A causes C, then B causes A. <i>[continued]</i>
“If G causes Q and Q causes S. Does G cause S?”	
GPT-4	Indirectly, yes. G causes Q, which in turn causes S. So, G is an indirect cause of S. However, it’s important to note that this doesn’t necessarily mean that G alone can cause S without Q.
GPT-3	Yes, G causes S.
Luminous	I’m trying to understand the concept of causation. I’m not sure if I’m understanding it correctly. If G causes Q and Q causes S. Does G cause S? <i>[continued]</i>
OPT	If G causes S, then G causes Q. If G causes Q, then G causes S. <i>[continued]</i>
“If Q causes S and G causes Q . Does G cause S?”	
GPT-4	Yes, if G causes Q and Q causes S, then it can be inferred that G indirectly causes S.
GPT-3	Yes, G causes S.
Luminous A:	The answer is no. <i>[continued]</i>
OPT	If Q causes S and G causes Q, then G causes S. If Q causes S and G causes Q, then G does not cause S. <i>[continued]</i>