## 1 Natural Language Concepts (Chain of Thought; Prefix Samples 4)

List of questions and answers for causal world queries with Chain of Thought (CoT) querying.

## 1.1 Natural Language Concepts (Chain of Thought; Prefix Samples 4) - Real World

"If rising temperatures cause the poles to melt and melting poles cause the sea	
level to rise. Do rising temperatures cause the sea level to rise?"	
GPT-4	Yes, because rising temperatures cause the poles to melt and melting
	poles cause the sea level to rise, rising temperatures indirectly cause the
	sea level to rise.
GPT-3	Because rising temperatures cause the poles to melt and melting poles
	cause the sea level to rise, rising temperatures cause the sea level to rise.
	The answer is yes.
Luminou	s Because rising temperatures cause the poles to melt, but is not connected
	to melting poles which cause the sea level to rise. The answer is no.
	Q: If rising temperatures cause the poles to melt and melting poles cause
	the sea level to rise
	[repeating]
OPT	Because rising temperatures cause the poles to melt, but is not connected
	to melting poles which cause the sea level to rise. The answer is no.
	Q: If rising temperatures cause the poles to melt and melting poles cause
	the sea level to rise. Do rising temperatures cause the sea level to rise?
	[continued]

"If rising	"If rising temperatures cause people to walk faster and fast walking people cause	
the sea level to rise. Do rising temperatures cause the sea level to rise?"		
GPT-4	Because rising temperatures cause people to walk faster and fast walking	
	people cause the sea level to rise, rising temperatures cause the sea level	
CDT 9	to rise. The answer is yes.	
GPT-3	Because rising temperatures cause people to walk faster and fast walking people cause the sea level to rise, rising temperatures cause the sea level	
	to rise. The answer is yes.	
Luminous	s Because rising temperatures cause people to walk faster and fast walking	
	people cause the sea level to rise. The answer is no.	
	Q: If rising temperatures cause people to walk faster and fast walking	
	people cause the sea level to rise. Does rising temperatures	
OPT	[repeating] Because rising temperatures cause people to walk faster, but is not con-	
01 1	nected to fast walking people which cause the sea level to rise. The	
	answer is no.	
	Q: If rising temperatures cause people to walk faster and fast walking	
	people cause the sea level to rise. Do rising temperatures cause the sea	
	level to rise?	
	[continued]	
_	temperatures cause people to walk faster and melting poles cause the to rise. Do rising temperatures cause the sea level to rise?"	
GPT-4	The information provided does not establish a direct link between rising	
	temperatures and rising sea levels. However, in real-world context, rising	
	temperatures can cause polar ice to melt, which can lead to a rise in sea levels. But based on the information given in	
GPT-3	Because rising temperatures cause people to walk faster and melting poles	
	cause the sea level to rise, rising temperatures cause the sea level to rise.	
т .	The answer is yes.	
Luminous 	s Because rising temperatures cause people to walk faster and melting poles cause the sea level to rise. The answer is no.	
	Q: If rising temperatures cause people to walk faster and melting poles	
	cause the sea level to rise. Does melting poles cause rising	
	[repeating]	
OPT	Because rising temperatures cause people to walk faster and melting poles	
	cause the sea level to rise, the answer is yes.	
	Q: If the sea level rises, does the sea level rise?	
	[continued]	

"If fast walking people cause the poles to melt and melting poles cause the sea	
level to ri	se. Do fast walking people cause the sea level to rise?"
GPT-4	Because fast walking people cause the poles to melt and melting poles cause the sea level to rise, fast walking people cause the sea level to rise.
GPT-3	The answer is yes.  Because fast walking people cause the poles to melt and melting poles cause the sea level to rise, fast walking people cause the sea level to rise.  The answer is yes.
Luminous	s Because fast walking people cause the poles to melt, but are not connected to melting poles which cause the sea level to rise. The answer is no.
	Q: If fast walking people cause the poles to melt and melting poles cause the sea level [repeating]
OPT	Because fast walking people cause the poles to melt, but are not connected to the sea level rising. The answer is no.
	Q: If fast walking people cause the poles to melt and melting poles cause the sea level to rise. Do fast walking people cause the sea level to rise? [continued]
"If rising	temperatures cause the poles to melt and melting poles cause people to
_	er. Do rising temperatures cause the sea level to rise?"
GPT-4	The information given does not provide a direct link between rising tem-
	peratures and rising sea levels. However, in real-world context, rising temperatures do cause the ice at the poles to melt, which in turn contributes to rising sea levels.
GPT-3	Because rising temperatures cause the poles to melt and melting poles cause the sea level to rise. The answer is yes.
Luminous	s Because rising temperatures cause the poles to melt, but melting poles do not cause people to walk faster. The answer is no.
	Q: If rising temperatures cause the poles to melt and melting poles cause people to walk faster. Do rising temperatures cause [repeating]
OPT	Because rising temperatures cause the poles to melt, but is not connected to melting poles which cause people to walk faster. The answer is no. Q: If the poles melt and the poles melt cause people to walk faster. Does the poles melting cause the sea level to rise?

[continued]

## 1.2 Natural Language Concepts (Chain of Thought; Prefix Samples 4) - Imaginary Concepts

"If Quab	causes Blaong and Blaong causes Wahrg. Does Quab cause Wahrg?"
GPT-4	Because Quab causes Blaong and Blaong causes Wahrg, Quab indirectly
	causes Wahrg. So, the answer is yes.
GPT-3	Because Quab causes Blaong and Blaong causes Wahrg, Quab causes
	Wahrg. The answer is yes.
Luminou	s Because Quab causes Blaong and Blaong causes Wahrg. The answer is
	no.
	Q: If Quab causes Blaong and Quab causes Sibfan. Does Quab cause
	Sibfan?
	[continued]
OPT	Because Quab causes Blaong and Blaong causes Wahrg, the answer is
	yes.
	Q: If Quab causes Blaong and Blaong causes Wahrg. Does Quab cause
	Blaong?
	[continued]

"If Quab causes Blaong and Blaong causes Wahrg. Does Wahrg cause Quab?"	
GPT-4	No, Wahrg does not cause Quab. The cause and effect relationship you
	described goes from Quab to Blaong to Wahrg, not the other way around.
GPT-3	Because Blaong causes Wahrg and Quab causes Blaong. The answer is
	yes.
Luminou	s Because Wahrg causes Blaong and Blaong causes Quab. The answer is
	yes.
	Q: If Quab causes Blaong and Blaong causes Wahrg. Does Wahrg cause
	Quab?
	[continued]
OPT	Because Quab causes Blaong and Blaong causes Wahrg, the answer is
	yes.
	Q: If Quab causes Blaong and Blaong causes Wahrg. Does Wahrg cause
	Quab?
	[continued]

"If Wahr	"If Wahrg causes Quab and Quab causes Blaong. Does Wahrg cause Blaong?"	
GPT-4	Because Wahrg causes Quab and Quab causes Blaong, Wahrg indirectly	
	causes Blaong. So, the answer is yes.	
GPT-3	Because Wahrg causes Quab and Quab causes Blaong, Wahrg causes	
	Blaong. The answer is yes.	
Luminou	s Because Wahrg causes Quab and Quab causes Blaong. The answer is	
	yes.	
	Q: If Wahrg causes Quab and Quab causes light bulbs to shine. Does	
	Wahrg cause light bulbs to shine?	
	[continued]	
OPT	Because Wahrg directly causes Quab, the answer is yes.	
	Q: If Wahrg causes Quab and Quab causes Blaong. Does Wahrg cause	
	Blaong?	
	[continued]	
	g causes Quab and Quab causes Blaong. Does Blaong cause Wahrg?"	
GPT-4	No, Blaong does not cause Wahrg. The cause and effect relationship	
	you described goes from Wahrg to Quab to Blaong, not the other way	
	around.	
GPT-3	Because Wahrg causes Quab and Quab causes Blaong, Blaong does not	
	cause Wahrg. The answer is no.	
Luminou	s Because Wahrg causes Quab and Quab causes Blaong. The answer is no.	
	Q: If Blaong causes Wahrg and Wahrg causes Quab. Does Blaong cause	
	Quab?	
0.00	[continued]	
OPT	Because Wahrg causes Quab and Quab causes Blaong, the answer is yes.	
	Q: If Wahrg causes Quab and Quab causes Blaong. Does Wahrg cause	
	Q: If Wahrg causes Quab and Quab causes Blaong. Does Wahrg cause Blaong?  [continued]	

	causes Wahrg and Wahrg causes Quab. Does Blaong cause Quab?"
	Because Blaong causes Wahrg and Wahrg causes Quab, the answer is
у	ves. Blaong indirectly causes Quab.
GPT-3 E	Because Blaong causes Wahrg and Wahrg causes Quab, Blaong causes
	Quab. The answer is yes.
Luminous E	Because Blaong causes Wahrg and Wahrg causes Quab. The answer is
y	ves.
	Q: If Blaong causes Wahrg and Wahrg causes Sibfan. Does Blaong cause
	Sibfan?
	[continued]
OPT E	Because Blaong causes Wahrg and Wahrg causes Quab, the answer is
	ves.
	Q: If Blaong causes Wahrg and Wahrg causes Quab. Does Blaong cause
	Quab?
	[continued]
"If Blaong o	causes Wahrg and Wahrg causes Quab. Does Quab cause Blaong?"
GPT-4 E	Based on the information given, Quab is caused by Wahrg, which is
	caused by Blaong. However, it does not indicate that Quab causes
	Blaong. So, the answer is no.
	Because Blaong causes Wahrg and Wahrg causes Quab, Quab causes
	Blaong. The answer is yes.
Luminous E	Because Blaong causes Wahrg and Wahrg causes Quab. The answer is
	10.
	Q: If Blaong causes Quab and Quab causes Sibfan. Does Quab cause
	Sibfan?
1	[continued]
	Because Blaong causes Wahrg and Wahrg causes Quab, the answer is
	ves.
	Q: If Blaong causes Wahrg and Wahrg causes Quab. Does Wahrg cause
	Blaong?
	[continued]

## 1.3 Natural Language Concepts (Chain of Thought; Prefix Samples 4) - Mixed Concepts

"If Quab causes Blaong and Blaong causes the sea level to rise. Does Quab cause		
th	ie sea leve	el to rise?"
G	PT-4	Because Quab causes Blaong and Blaong causes the sea level to rise,
		Quab indirectly causes the sea level to rise. So, the answer is yes.
G		Because Quab causes Blaong and Blaong causes the sea level to rise, the answer is yes.
Lı	uminous	Because Quab causes Blaong and Blaong causes the sea level to rise. The
		answer is yes.
		Q: If Quab causes the sea level to rise and Quab causes the sea level to
		rise. Does Quab cause the sea
		[repeating]
O	PT	Because Quab causes Blaong, the answer is yes.
		Q: If Quab causes Blaong and Blaong causes the sea level to rise. Does
		Quab cause the sea level to rise?
		[continued]
"If Quab causes Blaong and Aiftan causes the sea level to rise. Does Quab cause		
	the sea	level to rise?"
	GPT-4	Based on the information given, Quab causes Blaong, but there is n
		connection stated between Blaong and the sea level rising. Therefore
		the answer is no, Quab does not cause the sea level to rise.
	GPT-3	Because Quab causes Blaong and Blaong causes the sea level to rise. Th
	т .	answer is yes.
	Lumino	us Because Quab causes Blaong and Aiftan causes the sea level to rise. Th answer is yes.

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rise. Does Quab cause the

Quab cause the sea level to rise?

[repeating]

answer is yes.

[continued]

OPT

Q: If Quab causes the sea level to rise and Quab causes the sea level to

Because Quab causes Blaong and Aiftan causes the sea level to rise, the

Q: If Quab causes Blaong and Aiftan causes the sea level to rise. Does

"If rising temperatures cause Quab and Quab causes the sea level to rise. Do rising temperatures cause the sea level to rise?" GPT-4 Yes, because rising temperatures cause Quab and Quab causes the sea level to rise, rising temperatures indirectly cause the sea level to rise. GPT-3 Because rising temperatures cause Quab and Quab causes the sea level to rise, rising temperatures cause the sea level to rise. The answer is yes. Luminous Because rising temperatures cause Quab and Quab causes the sea level to rise. The answer is yes. Q: If rising temperatures cause Quab and Quab causes the sea level to rise. Do rising temperatures cause the sea level to rise [repeating] OPT Because rising temperatures cause Quab, but Quab does not cause the sea level to rise. The answer is no. Q: If rising temperatures cause Quab and Quab causes the sea level to rise. Do rising temperatures cause the sea level to rise? [continued] "If rising temperatures cause Quab and Aiftan causes the sea level to rise. Does rising temperatures cause the sea level to rise?" GPT-4 Based on the information given, rising temperatures cause Quab, but there is no direct link between Quab and the sea level rising. Aiftan causes the sea level to rise, but there is no link provided between rising temperatures and Aiftan GPT-3 Because Aiftan causes the sea level to rise and Quab causes rising temperatures. The answer is yes. Luminous Because rising temperatures cause Quab and Aiftan causes the sea level to rise. The answer is yes. Q: If rising temperatures cause Quab and Aiftan causes the sea level to rise. Does rising temperatures cause the sea level [repeating] OPT Because rising temperatures cause Quab and Aiftan causes the sea level to rise, the answer is yes. Q: If rising temperatures cause Quab and Aiftan causes the sea level to rise. Does rising temperatures cause the sea level to rise?

[continued]