

# 1 Natural Language Concepts (Chain of Thought; Prefix Samples 2)

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 2) - Real World

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| “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, rising temperatures cause the sea level to rise. This is because the rising temperatures cause the poles to melt, and the melting poles in turn 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.   |
| Luminous  | 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.<br>Q: If the sun rises in the east and sets in the west, does the sun rise<br><i>[repeating]</i> |
| OPT   | Because rising temperatures cause the poles to melt, but is not connected to the sea level which is caused by melting poles. The answer is no.<br>Q: If the sun is shining and the moon is shining. Does the sun shine?<br><i>[continued]</i>    |

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| “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   | Yes, if rising temperatures cause people to walk faster and fast walking people cause the sea level to rise, then rising temperatures indirectly cause the sea level to rise.  |
| 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  | Because rising temperatures cause people to walk faster, but is not connected to fast walking people which cause the sea level to rise. The answer is no.<br>Q: If the sun rises in the east and sets in the west, does the sun<br><i>[repeating]</i>            |
| OPT   | Because rising temperatures cause people to walk faster, but is not connected to fast walking people which cause the sea level to rise. The answer is no.<br>Q: If the sea level rises, will the sea level rise?<br><i>[continued]</i>                           |
| “If rising temperatures cause people to walk faster and melting poles cause the sea level to rise. Do rising temperatures cause the sea level to rise?”       |  |
| GPT-4   | Yes, indirectly, rising temperatures can cause the sea level to rise. This is because rising temperatures can cause the polar ice caps to melt, which in turn raises the sea level.  |
| GPT-3   | Because rising temperatures are not connected to melting poles, which is the main cause of the sea level rising. The answer is no.   |
| Luminous  | Because rising temperatures cause people to walk faster, but is not connected to melting poles which cause the sea level to rise. The answer is no.<br>Q: If the sun rises in the east and sets in the west, does the sun rise<br><i>[repeating]</i>             |
| OPT   | Because rising temperatures cause people to walk faster, but are not connected to melting poles which cause the sea level to rise. The answer is no.<br>Q: If the sun is hot and the moon is cold. Does the sun cause the moon to be cold?<br><i>[continued]</i> |

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| “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?” |   |
| GPT-4   | Assuming the hypothetical situation where fast walking people cause the poles to melt and melting poles cause the sea level to rise, then yes, fast walking people would indirectly cause the sea level to rise. However, in reality, fast walking people do not cause                                |
| GPT-3   | 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  | Because fast walking people cause the poles to melt, but is not connected to melting poles which cause the sea level to rise. The answer is no.<br>Q: If the sun causes the sea level to rise and shining light bulbs cause moths<br><i>[repeating]</i>   |
| OPT   | Because fast walking people cause the poles to melt, but are not connected to the sea level which is caused by melting poles. The answer is no.<br>Q: If the sun causes the sea level to rise and the sea level causes the poles to melt. Does the sun cause the poles to melt?<br><i>[continued]</i> |
| “If rising temperatures cause the poles to melt and melting poles cause people to walk faster. Do rising temperatures cause the sea level to rise?” |   |
| GPT-4   | The information given does not provide a direct link between rising temperatures 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 people to walk faster, rising temperatures do not cause the sea level to rise. The answer is no.  |
| Luminous  | 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.<br>Q: If the sun rises in the east and sets in the west, does the sun rise in<br><i>[repeating]</i>   |
| 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.<br>Q: If the sun is hot and the moon is cold. Does the sun cause the moon to be cold?<br><i>[continued]</i>   |

## 1.2 Natural Language Concepts (Chain of Thought; Prefix Samples 2) - Imaginary Concepts

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| “If Quab causes Blaong and Blaong causes Wahrg. Does Quab cause Wahrg?” |  |
| GPT-4   | Yes, if Quab causes Blaong and Blaong causes Wahrg, then Quab indirectly causes Wahrg.   |
| GPT-3   | Because Quab causes Blaong and Blaong causes Wahrg, Quab causes Wahrg. The answer is yes.  |
| Luminous  | Because Quab causes Blaong and Blaong causes Wahrg, but is not connected to Quab which causes Wahrg. The answer is no.<br>Q: If Quab causes Blaong and Blaong causes Wahrg. Does Quab<br><i>[repeating]</i>  |
| OPT   | Because Quab causes Blaong and Blaong causes Wahrg, Quab causes Wahrg. The answer is yes.<br>Q: If Quab causes Blaong and Blaong causes Wahrg. Does Quab cause Wahrg?<br><i>[continued]</i>                  |
| “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 Quab causes Blaong and Blaong causes Wahrg, Wahrg does cause Quab. The answer is yes.  |
| Luminous  | Because Quab causes Blaong and Blaong causes Wahrg, but is not connected to Wahrg which causes Quab. The answer is no.<br>Q: If Quab causes Blaong and Blaong causes Wahrg. Does Wahrg<br><i>[repeating]</i> |
| OPT   | Because Quab causes Blaong and Blaong causes Wahrg, but Wahrg does not cause Quab. The answer is no.<br>Q: If Quab causes Blaong and Blaong causes Wahrg. Does Wahrg cause Quab?<br><i>[continued]</i>       |



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| “If Blaong causes Wahrg and Wahrg causes Quab. Does Blaong cause Quab?” |   |
| GPT-4   | Yes, if Blaong causes Wahrg and Wahrg causes Quab, then Blaong indirectly causes Quab.  |
| GPT-3   | Because Blaong causes Wahrg and Wahrg causes Quab, Blaong causes Quab. The answer is yes.   |
| Luminous  | Because Blaong causes Wahrg and Wahrg causes Quab, but Blaong is not connected to Quab. The answer is no.<br>Q: If Blaong causes Wahrg and Wahrg causes Quab. Does Blaong cause Quab<br><i>[repeating]</i>  |
| OPT   | Because Blaong causes Wahrg, but is not connected to Quab. The answer is no.<br>Q: If a man is in a room with a man and a woman and the man is in the room with the woman. Does the man in the room with the woman cause the woman to appear?<br><i>[continued]</i> |
| “If Blaong causes Wahrg and Wahrg causes Quab. Does Quab cause Blaong?” |   |
| GPT-4   | Based on the information given, no, Quab does not cause Blaong. The relationship described is one way: Blaong causes Wahrg, and Wahrg causes Quab. It does not indicate that Quab causes Blaong.  |
| GPT-3   | Because Blaong causes Wahrg and Wahrg causes Quab, Quab causes Blaong. The answer is yes.   |
| Luminous  | Because Blaong causes Wahrg and Wahrg causes Quab, but Quab does not cause Blaong. The answer is no.<br>Q: If Blaong causes Wahrg and Wahrg causes Quab. Does Quab cause Blaong<br><i>[repeating]</i>   |
| OPT   | Because Blaong causes Wahrg and Wahrg causes Quab, but Quab does not cause Blaong. The answer is no.<br>Q: If Blaong causes Wahrg and Wahrg causes Quab. Does Quab cause Blaong?<br><i>[continued]</i>  |

### 1.3 Natural Language Concepts (Chain of Thought; Prefix Samples 2) - Mixed Concepts

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| “If Quab causes Blaong and Blaong causes the sea level to rise. Does Quab cause the sea level to rise?” |   |
| GPT-4   | Yes, if Quab causes Blaong and Blaong causes the sea level to rise, then Quab indirectly causes the sea level to rise.  |
| GPT-3   | Because Quab causes Blaong and Blaong causes the sea level to rise, Quab causes the sea level to rise. The answer is yes.   |
| Luminous  | Because Quab causes Blaong and Blaong causes the sea level to rise, but is not connected to Quab which causes the sea level to rise. The answer is no.<br>Q: If the sun causes the earth to heat up and<br><i>[repeating]</i>   |
| OPT   | Because Quab causes Blaong, but Blaong does not cause the sea level to rise. The answer is no.<br>Q: If the sea level rises, does the sea level rise?<br><i>[continued]</i>   |
| “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 no connection stated between Quab and the sea level rising. So, no, Quab does not cause the sea level to rise.   |
| GPT-3   | Because Quab causes Blaong and Aiftan causes the sea level to rise, Quab does not have a direct impact on the sea level. The answer is no.  |
| Luminous  | Because Quab causes Blaong and Aiftan causes the sea level to rise, but is not connected to Quab which causes the sea level to rise. The answer is no.<br>Q: If the sun causes the earth to heat up<br><i>[repeating]</i>   |
| OPT   | Because Quab causes Blaong and Aiftan causes the sea level to rise, Quab causes the sea level to rise. The answer is yes.<br>Q: If the sun causes the earth to rotate and the earth causes the sun to rise. Does the sun cause the earth to rotate?<br><i>[continued]</i> |

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| “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, if rising temperatures cause Quab and Quab causes the sea level to rise, then 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, but is not connected to rising temperatures which cause the sea level to rise. The answer is no.<br>Q: If the sun causes the earth to heat up and<br><i>[repeating]</i>   |
| OPT  | Because rising temperatures cause Quab, but Quab does not cause the sea level to rise. The answer is no.<br>Q: If the sea level rises, does the sea level rise?<br><i>[continued]</i>   |
| “If rising temperatures cause Quab and Aiftan causes the sea level to rise. Does rising temperatures cause the sea level to rise?” |   |
| GPT-4  | If rising temperatures cause Quab and Quab causes Aiftan, and Aiftan causes the sea level to rise, then yes, rising temperatures would indirectly cause the sea level to rise.  |
| GPT-3  | Because rising temperatures cause Quab and Aiftan, which in turn causes the sea level to rise. The answer is yes.   |
| Luminous   | Because rising temperatures cause Quab and Aiftan causes the sea level to rise, but is not connected to rising temperatures which cause the sea level to rise. The answer is no.<br>Q: If the sun causes the earth to heat up<br><i>[repeating]</i>   |
| OPT  | Because rising temperatures cause Quab and Aiftan, but is not connected to the sea level which allows for moths to appear. The answer is no.<br>Q: If the sun causes the earth to rotate and the earth rotating causes the moon to appear. Does the sun cause the moon to appear?<br><i>[continued]</i> |