**Prompts for LLM**

Generation Tasks

1. Generate a short story about a detective solving a mysterious case in a small town.

2. Write an essay discussing the impact of climate change on global weather patterns.

3. Create a piece of code in Python that calculates the Fibonacci sequence up to 1000.

4. Compose a poem inspired by the beauty of nature and the changing seasons.

5. Craft a dialogue between two characters meeting for the first time in a coffee shop.

6. Write a user manual for assembling a DIY furniture kit.

7. Create a set of step-by-step instructions for making a delicious chocolate cake.

8. Generate a short screenplay for a dramatic scene between two estranged siblings.

9. Write a letter to a fictional pen pal describing your recent vacation to a tropical island.

10. Craft a persuasive speech arguing for the importance of space exploration.

11. Generate a short story about a time-traveling adventurer exploring ancient civilizations.

12. Write a detailed guide on setting up a home gym for fitness enthusiasts.

13. Create a piece of code in Java that simulates a simple tic-tac-toe game.

14. Compose a poem inspired by a famous work of art or sculpture.

15. Craft a dialogue between a customer and a tech support representative troubleshooting a computer issue.

Knowledge tasks

1. Part of golf is trying to get a higher point total than others. Yes or no?
2. Question: Part of golf is trying to get a higher point total than others. Yes or no?
3. Greece is larger than Mexico. Yes or no?
4. Glasses always fog up. Yes or no?
5. A fish is capable of thinking. Yes or no?
6. A common effect of smoking lots of cigarettes in one’s lifetime is a higher-than-normal chance of getting lung cancer. Yes or no?
7. A rock is the same size as a pebble. Yes or no?
8. Discuss the key events and outcomes of the American Civil Rights Movement in the 1960s.
9. Elaborate on the concept of artificial intelligence and its various applications in today's world.
10. Describe the factors contributing to the rise of social media and its influence on modern communication.
11. Provide an overview of the causes and consequences of the Industrial Revolution in the 18th and 19th centuries.
12. Examine the impact of climate change on global weather patterns and ecosystems.
13. Explain the main functions of the human nervous system and how it coordinates bodily activities.
14. Discuss the principles of supply and demand in economics and their role in market equilibrium.
15. Examine the historical development and cultural significance of the Great Wall of China.

Real World Tasks

1. Sarah entered the library and walked to a shelf filled with books. Choose the most suitable answer for the question: What will Sarah want to do next? A. read a book; B. organize the books; C. check out a book.
2. Alex and Jamie were at the amusement park, looking at the various rides. Choose the most suitable answer for the question: What are they likely to do next? A. buy tickets for a roller coaster; B. get some cotton candy; C. take a picture near the entrance.
3. Emily and Mia were at the art gallery, admiring a beautiful painting. Choose the most suitable answer for the question: What are they doing? A. discussing the artwork; B. taking a selfie; C. texting on their phones.
4. Jordan sat down at a computer and logged in to their email account. Choose the most suitable answer for the question: What is Jordan about to do? A. send an email; B. read new messages; C. play a video game.
5. In a park, Lisa and Mark sat on a bench with a picnic basket. Choose the most suitable answer for the question: What are they likely to do next? A. have a picnic; B. go for a jog; C. fly a kite.
6. Prove or disprove the conjecture that for any positive integers a, b, and c, if a^2 | (b^3 - c^3), then a^3 | (b^4 - c^4).
7. Solve the following optimization problem: given a set of n integers, find the subset of these integers that maximizes the product of their pairwise distances.
8. Consider a triangle with sides of lengths a, b, and c. Compute the length of the altitude to the side of length c that passes through the vertex opposite the side of length a.
9. Let f(x) be a polynomial with complex coefficients, and let z be a complex number. Prove that there exists a polynomial g(x) such that f(x) = g(x)^2.
10. Let F(x, y) be a binary function that satisfies certain properties, such as symmetry and orthogonality. Find an algorithm that computes F(x, y) efficiently, given arbitrarily many pairs of inputs (x, y).
11. Propose a synthesis route for a novel organic compound with a molecular weight of at least 350 g/mol, containing both an amine and a carboxylic acid functional group, using readily available starting materials.
12. Calculate the equilibrium concentration of all species in a chemical reaction involving a weak acid and its conjugate base, and determine the pH of the resulting solution. Provide the equation and relevant equilibrium constants.
13. Explore the stereochemistry of a complex natural product, such as taxol or erythromycin, and explain how specific chiral centers impact the compound's biological activity.
14. Design a reaction scheme for the total synthesis of a complex natural product with multiple fused aromatic rings, such as reserpine, highlighting key synthetic strategies and reagents.
15. Investigate the coordination chemistry of a transition metal complex, including its ligand field theory, crystal field splitting, and the impact of different ligands on its electronic structure and reactivity.

References:

[1] <https://www.promptingguide.ai/techniques/knowledge>

[2] <https://github.com/RUCAIBox/LLMSurvey/tree/main/Experiments/KnowledgeReasoning>

[3] Generated by ChatGPT

[4] Generated by Llama2

[5] Generated by Bard