



# 100 Expert-Level Benchmark Questions for LLMs

## Logical Reasoning & Riddles

| Question  | Answer   |
|---|----------|
| 1. Alice and Bob are either truth-tellers or liars. Alice says, "Both of us are liars." Who is the truth-teller?  | Bob      |
| 2. A man looks at a photo and says, "Brothers and sisters, I have none. But that man's father is my father's son." Whose picture is he looking at?                        | Son      |
| 3. A man walks 1 mile south, 1 mile east, and 1 mile north and ends up back where he started. What color is the bear nearby?  | White    |
| 4. You have 4 apples and take away 3. How many apples do you have?  | 3        |
| 5. How many times can you subtract 5 from 25?   | Once     |
| 6. What gets wetter the more it dries?  | Towel    |
| 7. What disappears as soon as you say its name?   | Silence  |
| 8. What is it that no man wants, but no man wants to lose?  | Lawsuit  |
| 9. A father and son are in a car crash. The father dies, and the boy is rushed to surgery. The surgeon says, "I can't operate on him. He's my son." How is this possible? | Mother   |
| 10. I have keys but no locks, and space but no room. You can enter but can't go out. What am I?   | Keyboard |
| 11. What occurs once in every minute, twice in every moment, but never in a thousand years?   | M        |
| 12. I am always hungry and will die if not fed, but whatever I touch turns red. What am I?  | Fire     |
| 13. What breaks as soon as you say it?  | Promise  |
| 14. "Sphinx of black quartz, judge my vow" is peculiar because it contains every letter of the English alphabet except one. What kind of sentence is this?                | Pangram  |
| 15. I have cities but no houses, forests but no trees, and water but no fish. What am I?  | Map      |

## Mathematical & Numerical Challenges

| Question   | Answer |
|--|--------|
| 16. Divide 30 by 1/2 and add 10. What number do you get? | 70     |

| Question   | Answer            |
|--|-------------------|
| 17. A bat and a ball cost \$1.10 total. The bat costs \$1.00 more than the ball.<br>How much does the ball cost? (in dollars)                              | 0.05              |
| 18. "A hen and a half lays an egg and a half in a day and a half." How many eggs will one hen lay in one day?  | 2/3               |
| 19. At a party everyone shook hands with everyone else. There were 66 handshakes total. How many people were at the party?                                 | 12                |
| 20. The day before yesterday was Friday. What day will it be the day after tomorrow?   | Tuesday           |
| 21. If today is Monday, what day will it be 100 days from now?   | Wednesday         |
| 22. How many zeros are in the number one trillion (1,000,000,000,000)?   | 12                |
| 23. What is the last digit of $7^{100}$ ?  | 1                 |
| 24. What is the smallest positive number divisible by all the integers from 1 through 10?  | 2520              |
| 25. $111,111,111 \times 111,111,111 = ?$   | 12345678987654321 |
| 26. A snail climbs a 10-meter pole by day (3 m up) and slips by night (2 m down). How many days will it take to reach the top?                             | 8                 |
| 27. If two standard six-sided dice are rolled, what is the probability of getting a sum of 7?  | 1/6               |
| 28. Multiply the number of continents on Earth by the number of planets in the solar system, then subtract the number of deadly sins. What number results? | 49                |
| 29. A circle has an area of $16\pi$ . What is the radius of the circle?  | 4                 |
| 30. If a triangle has angles of $90^\circ$ and $45^\circ$ , what is the measure of the third angle?  | $45^\circ$        |

## Language & Word Puzzles

| Question   | Answer       |
|--|--------------|
| 31. What vehicle is spelled the same forward and backward?                                       | Racecar      |
| 32. What is the only common English word that ends with the letters "mt"?                        | Dreamt       |
| 33. What five-letter word sounds the same even after you remove its last four letters?           | Queue        |
| 34. What is the longest English word you can type using only the left hand on a QWERTY keyboard? | Stewardesses |
| 35. Which English word has three consecutive double letters in it?                               | Bookkeeper   |

| Question   | Answer    |
|--|-----------|
| 36. What English word contains all five vowels (A, E, I, O, U) in alphabetical order?  | Facetious |
| 37. What five-letter word looks the same when turned upside down (in capital letters)?   | SWIMS     |
| 38. Which letter appears most frequently when writing out the numbers 1 through 99 in English?   | E         |
| 39. What common six-letter English word is spelled with its letters in alphabetical order?   | Almost    |
| 40. There is a nine-letter word that remains an English word as you remove one letter from its end each time until one letter remains. What is the word? | Startling |
| 41. "The yolk of the egg __ white." Which is correct: "is" or "are"?   | Neither   |
| 42. Unscramble the letters "O O M N" to form a common English word.  | Moon      |
| 43. What seven-letter word contains ten smaller words spelled within it (without rearranging letters)?   | Therein   |
| 44. Which word in the English language is always spelled incorrectly?  | Wrong     |
| 45. What three-letter word is both a cutting tool and the past tense of a common verb?   | Saw       |

## Context Understanding & Coreference

| Question  | Answer     |
|---|------------|
| 46. "The trophy didn't fit in the suitcase because it was too large." What was too large?                       | Trophy     |
| 47. "The city councilmen refused the demonstrators a permit because they feared violence." Who feared violence? | Councilmen |
| 48. Joan made sure to thank Susan for all the help she had given. Who had given help?                           | Susan      |
| 49. The girl did not give the ticket to the woman because she had no money. Who had no money?                   | Woman      |
| 50. Tom asked Steve to lend him some money because he was broke. Who was broke?                                 | Tom        |
| 51. Ann tried to paint a portrait of Nancy, but she kept moving. Who kept moving?                               | Nancy      |
| 52. The cat chased the mouse because it was hungry. What was hungry?  | Cat        |
| 53. The sidewalk was covered in ice. We avoided walking on it because it was slippery. What was slippery?       | Sidewalk   |
| 54. Sam tried calling Alex on the phone, but he didn't answer. Who didn't answer?                               | Alex       |
| 55. The delivery truck zoomed past the school bus because it was going so slow. What was going slow?            | Bus        |

| Question   | Answer |
|--|--------|
| 56. Jim lent his book to Robert because his own was lost. Whose book was lost?         | Robert |
| 57. When Tim visited John, he brought a gift. Who brought a gift?                      | Tim    |
| 58. Paul tried to call Jordan, but he was asleep. Who was asleep?                      | Jordan |
| 59. Sarah thanked Emma for the gift she gave her. Who gave a gift?                     | Emma   |
| 60. "Alice informed Mary that she won the prize." In this sentence, who won the prize? | Mary   |

## Pattern Recognition & Sequences

| Question  | Answer |
|---|--------|
| 61. What is the next number in the sequence 1, 1, 2, 3, 5, 8, ...?                  | 13     |
| 62. What is the next entry in the sequence: 1; 11; 21; 1211; 111221; ...?           | 312211 |
| 63. What letter comes next in the sequence: O, T, T, F, F, S, S, E, __?             | N      |
| 64. Which number does not belong in the series: 2, 3, 5, 7, 11, 13, 14, 17, 19?     | 14     |
| 65. Which word is the odd one out: apex, summit, pinnacle, nadir, peak?             | Nadir  |
| 66. If A=1, B=2, ... Z=26, what is the total value of the letters in "CAB"?         | 6      |
| 67. Find the next number in the pattern: 2, 4, 8, 14, 22, 32, ...                   | 44     |
| 68. The sequence of perfect squares is 1, 4, 9, 16, __, 36. What number is missing? | 25     |
| 69. The sequence 1, 2, 6, 24, 120, ... continues with what number?                  | 720    |
| 70. Fill in the blank in the pattern: AZ, BY, CX, DW, __.                           | EV     |
| 71. The triangular numbers go 1, 3, 6, 10, 15, ... What comes next?                 | 21     |
| 72. What is the next number in the series: 2, 3, 5, 9, 17, 33, ...?                 | 65     |
| 73. 121, 144, 169, 196, ... What is the next number in this sequence?               | 225    |
| 74. If 1 = 5, 2 = 25, 3 = 325, 4 = 4325, then 5 = ?                                 | 54325  |
| 75. What letter comes next in the sequence: A, C, F, J, O, __ ?                     | U      |

## Knowledge & Application

| Question   | Answer   |
|--|----------|
| 76. What is the last name of the scientist who developed the theory of relativity? | Einstein |
| 77. Diamond is an allotrope of which element?                                      | Carbon   |

| Question  | Answer       |
|---|--------------|
| 78. Which is the largest planet in our solar system?                | Jupiter      |
| 79. In which city is the Nobel Peace Prize awarded?                 | Oslo         |
| 80. What is the last name of the first person to walk on the Moon?  | Armstrong    |
| 81. Which country is nicknamed the “Land of the Rising Sun”?        | Japan        |
| 82. What is the largest organ of the human body?                    | Skin         |
| 83. Which planet is known for its prominent rings?                  | Saturn       |
| 84. In what city is the Taj Mahal located?                          | Agra         |
| 85. What instrument is used to measure atmospheric pressure?        | Barometer    |
| 86. Which element has atomic number 1 on the periodic table?        | Hydrogen     |
| 87. In what year did World War I begin?                             | 1914         |
| 88. What is the largest land animal on Earth?                       | Elephant     |
| 89. What is the hardest natural substance known on Earth?           | Diamond      |
| 90. Which Italian artist painted the ceiling of the Sistine Chapel? | Michelangelo |

## Parsing & Miscellaneous

| Question  | Answer      |
|---|-------------|
| 91. Given the JSON object <code>{"name": "Alice", "age": 25, "city": "London"}</code> , what is the value of the <code>"city"</code> key? | London      |
| 92. What is the result of the expression $3 + 5 * 2$ ?  | 13          |
| 93. If $x = 5$ and $y = 3$ , and then $x$ is set to $x + y$ , what is the value of $x$ ?  | 8           |
| 94. Combine the chemical symbols for tungsten and holmium to form the name of a famous rock band.   | WHO         |
| 95. What character is represented by the ASCII code 65?   | A           |
| 96. Compute $2 + 2$ , but give your answer in binary.   | 100         |
| 97. If $x$ starts at 0 and is increased by 1 in each of 5 loop iterations, what is the value of $x$ at the end?                           | 5           |
| 98. John is older than Mary, and Mary is older than Alex. Who is the youngest of the three?   | Alex        |
| 99. What part of speech is the word “and”?  | Conjunction |
| 100. What is the fifth word of this sentence?   | Word        |

Each question above is designed to test a specific aspect of expert-level reasoning, from logic puzzles and mathematical calculations to language quirks, context inference, pattern recognition, factual knowledge, and precise instruction following. All answers are a single word or number, and each question is crafted to be unambiguous with a definitively correct answer.

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