Classifying Algorithms Activity

Using what you have learned about algorithms, classify the following algorithms into the correct category. Each algorithm only fits into one category. For each algorithm, also provide an explanation for why it fits into the category. Compare your answers with a partner.

Algorithm Categories:

* Logarithmic
* Linear
* Quadratic
* Exponential

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| **Algorithm** | **Category** | **Explanation** |
| 1. Searching for a name in an unsorted list. |  |  |
| 2. Guessing a number between 1 and 100 if your guesses are characterized as "too high" or "too low". |  |  |
| 3. Sorting a deck of cards by comparing two cards at a time, such as in bubble sort. |  |  |
| 4. Finding all the possible paths between two squares on a Checker board. |  |  |
| 5. Computing the sum of a list of numbers. |  |  |
| 6. Searching for a name in an alphabetical list. |  |  |
| 7. Sorting a deck of cards by suit without sorting the cards by rank, such as in bucket sort. |  |  |
| 8. Traveling Salesman Problem |  |  |
| 9. Counting the number of pawns on a Chessboard. |  |  |
| 10. Sorting a list of numbers by comparing two adjacent numbers at a time. |  |  |