Congratulations! You passed!

Grade received 80% **To pass** 80% or higher

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1. Given an array of 12 numbers `->` `1,45,5,34,23,5,82,12,35,21,8,9` **0 / 1 point**

And a hashing function modulus 6. How many collisions would you expect to have in your table?

- ○ 5
- ○ 4
- ◉ 7
- ○ 6

Incorrect
Not quite. Applying modulus 6 to the data would not generate 7 of the same number.

2. What data structure would be most suitable for mimicking the actions of a hashtable? **1 / 1 point**

- ○ Stack
- ○ Queue
- ◉ Dictionaries

Correct
That's correct. Some languages that do not have built-in hashtable types use dictionaries to emulate the behavior.

3. What value is stored at the root of a min_heap? **1 / 1 point**

- ◉ The lowest value
- ○ The last inserted value
- ○ The highest value

Correct
That's correct. A min heap stores in order of lowest to highest

4. Why is the travelling salesman used in graphs? **1 / 1 point**

- ○ Because graphs store information in a fixed way so that every node is the exact same distance apart. Allowing us apply travel times to it.
- ○ Because the distance between two nodes reflects distance in real life.
- ◉ Because the analogy of travelling can be related to the number of connected nodes.

Correct
That's correct. When one talks about the travelling sales man, it need not be routed in actual distance. Instead, this is an analogy to the connectedness between elements. From this principle, many algorithms can be applied to extract information from data.

5. In relation to computer science what is a clique? **1 / 1 point**

- ◉ It is a subset of a graph that has found to have strong internal connections and weak external ones.
- ○ It is a social group that one actively engages with.
- ○ It is a memory feature that allows for quick lookup of one's social circle.

Correct
That's correct. It can be determined by analyzing the interconnectedness of nodes and comparing them to external nodes.