1. Which of the following is best suited for a dictionary instead of a list?

A. The order in which people finish a race
B. The ingredients necessary for a recipe
C. The names of world countries and their capital cities
D. 50 random integers

2. What is the dictionary \( d \) created by the following code?

\[
d = \{3:4\}
d[5] = d.get(4, 8)
d[4] = d.get(3, 9)
\]

A. \( \{3:4, 5:8, 4:9\} \)
B. \( \{3:4, 5:8, 4:4\} \)
C. \( \{3:4, 5:4, 4:3\} \)
D. Error caused by get

3. What is the dictionary \( d \) created by the following code?

\[
d = \{3:4\}
d[5] = d.get(4, 8)
d[4] = d.get(3, 9)
\]

A. \( \{3:4, 5:8, 4:9\} \)
B. \( \{3:4, 5:8, 4:4\} \)
C. \( \{3:4, 5:4, 4:3\} \)
D. Error caused by get

4. What is the dictionary \( d \) created by the following code?

\[
d = \{1:5\}
d[2] = d.get(1, 6)
d[4] = d.get(3, 7)
\]

A. \( \{1:5, 2:5, 4:7\} \)
B. \( \{1:5, 2:6, 4:7\} \)
C. \( \{1:5, 2:1, 4:2\} \)
D. Error caused by get

5. What is the dictionary \( d \) created by the following code?

\[
d = \{1:5\}
d[2] = d.get(1, 6)
d[4] = d.get(3, 7)
\]

A. After the first line, \( d \) is \( \{1:5\} \), after the second \( \{1:5, 2:5\} \) and after the third \( \{1:5, 2:5, 4:7\} \). Recall the first argument to get is the key, if it is present in the dictionary, its value is returned, if not, its second argument is returned.
6. **Which of the following is a difference between lists and dictionaries?**

- **A** List elements cannot be mutable, but dictionary values can be mutable
- **B** Assigning to an index that does not exist in a list is an error, but assigning a value to a key that does not exist in a dictionary is not
- **C** A list can contain a dictionary as one of its elements, but a dictionary cannot contain a list as one of its values
- **D** There is a dict constructor that creates a dictionary from a suitable object, but there is no list constructor that similarly creates lists

B. Assigning to key in a dictionary that doesn't exist is a common technique to adding key-value pairs to dictionaries. But it is an error to assign to an index not present in a list (i.e. beyond the end of the list).