

Game 47 – Operas

An opera company selects from among six operas—*Fidelio*, *La Boheme*, *Otello*, *Siegfried*, *Tosca* and *Zauberflöte*—to perform during a given opera season. Each opera, if performed, will be performed exactly once. The list of operas performed is consistent with the following conditions:

If *Tosca* is performed, then *Zauberflöte* is not.

Fidelio is performed only if *Tosca* is performed.

If *La Boheme* is performed, then so is *Zauberflöte*.

If *Fidelio* is not performed, then *Siegfried* is.

If *Tosca* is not performed, *Otello* is not performed.

- Which one of the following could be a complete and accurate list of the operas performed in a given season?
 - Fidelio*, *La Boheme*, *Otello*, *Siegfried*
 - La Boheme*, *Otello*, *Tosca*, *Zauberflöte*
 - Fidelio*, *La Boheme*, *Tosca*, *Zauberflöte*
 - La Boheme*, *Siegfried*, *Tosca*
 - Fidelio*, *Tosca*
- If *Fidelio* is not performed in a given opera season, then each of the following could be true about that opera season EXCEPT
 - Tosca* is performed.
 - Otello* is performed.
 - Neither *La Boheme* nor *Tosca* is performed.
 - Neither *La Boheme* nor *Siegfried* is performed.
 - Neither *Otello* nor *Tosca* is performed.
- If in a given opera season both *Otello* and *Tosca* are performed, then which one of the following must be true in that opera season?
 - La Boheme* is the only other opera performed.
 - Siegfried* is the only other opera performed.
 - At most two other operas are performed.
 - Neither *Fidelio* nor *Siegfried* is performed.
 - Exactly one other opera is performed.
- If *Zauberflöte* is performed in a given opera season, then which one of the following must be true during that opera season?
 - Siegfried* is performed.
 - La Boheme* is performed.
 - Both *La Boheme* and *Siegfried* are performed.
 - At most one other opera is performed.
 - At least two other operas are performed.
- Which one of the following is the maximum number of operas which could be performed during a given opera season?
 - two
 - three
 - four
 - five
 - six
- Each of the following is a pair of operas which could be performed together EXCEPT
 - Fidelio*, *Otello*
 - Fidelio*, *La Boheme*
 - Fidelio*, *Siegfried*
 - Siegfried*, *La Boheme*
 - Siegfried*, *Otello*

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1. E
2. D
3. C
4. A
5. C
6. B

Question 1, like most first questions, is a testing of the rules. All four answer choices violate one of the conditions. Question 2 is D because if *Fidelio* is performed, *Siegfried* must be performed. On Question 3, because *Tosca* can't be with *Zauberflöte* and because *La Boheme* means the existence of *Zauberflöte*, then *Tosca* can't be with either of those—and thus only two more operas can be performed.

On Question 4, the key is that you need either *Fidelio* or *Siegfried* under the rules, and you can't have *Fidelio* if *Zauberflöte* is performed. For the maximum number question, remember to identify rules that require two things to not be together. There is only one such rule—the *Tosca* and *Zauberflöte* rule—but *La Boheme* impels the existence of *Zauberflöte* and thus cannot be included in such a maximum list as well. On Question 6, you cannot have both *Fidelio* and *La Boheme* because *Fidelio* means *Tosca* and *La Boheme* means *Zauberflöte*, and *Tosca* and *Zauberflöte* can't go together.