

Game 33 – Exterminator

An exterminator will visit three different apartment complexes—Glens, Islandview and Willows—to spray for pests. At each apartment complex, the exterminator will spray for up to three pests—fleas, roaches, or termites. The exterminator’s visits are governed by the following conditions:

If Glens is sprayed for fleas, Willows is not.

If Islandview is sprayed for roaches, Glens is not.

If Willows is sprayed for roaches, Islandview is sprayed for termites.

If at least two apartment complexes are sprayed for a particular pest, the third one is as well. Islandview is sprayed for fleas.

1. Which one of the following could be true?
 - A. Both Willows and Islandview are sprayed for roaches.
 - B. Both Willows and Islandview are sprayed for fleas.
 - C. Glens is sprayed for both fleas and termites.
 - D. Willows is sprayed for both roaches and termites.
 - E. Willows is sprayed for both fleas and termites.
2. If Glens is sprayed for roaches, which one of the following could be true?
 - A. Willows is sprayed for roaches.
 - B. Willows is sprayed for fleas.
 - C. Glens is sprayed for termites.
 - D. Glens is sprayed for fleas.
 - E. Islandview is sprayed for roaches.

3. Which one of the following must be true?
 - A. If Willows is sprayed for roaches, Islandview is not.
 - B. If Willows is sprayed for termites, Glens is not.
 - C. If Islandview is sprayed for termites, so is Willows.
 - D. If Glens is sprayed for fleas, so is Willows.
 - E. If Glens is sprayed for termites, so is Islandview.
4. If Willows is sprayed for exactly two types of pest, which one of the following must be true?
 - A. Glens is sprayed for termites.
 - B. Glens is sprayed for roaches.
 - C. Glens is sprayed for fleas.
 - D. Islandview is sprayed for roaches.
 - E. Willows is sprayed for fleas.
5. Which is a complete and accurate list of the apartment complexes which could be sprayed for all three types of pest, not necessarily at the same time?
 - A. Willows
 - B. Glens
 - C. Islandview
 - D. Willows and Islandview
 - E. Glens and Islandview

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1. D
2. C
3. A
4. A
5. C

The rule that if two are sprayed for a pest, the third is as well, is key to solving this game. Think about what's happening in the third apartment building.

On both the first and second questions, four of the choices break a rule. In the third question, if both Willows and Islandview were sprayed for roaches, this would mean Glens would be too—in violation of the rules.

On the fourth question, the two that Willows is sprayed for must be roaches and termites, since fleas would violate the rules. This places termites in Islandview and thus in Glens under the rules. Finally, on Question 5, all other choices violate a rule—plug it out if you don't see it. Remember to pay attention to the first rule.