

## The Lady or the Tiger:

The following problems are from The Lady or the Tiger by Raymond Smullyan.

1. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. In this room there is a lady, and in the other room there is a tiger.
  - II. In one of these rooms there is a lady, and in one of these rooms there is a tiger.
- One of the signs is true and the other is false. Which room should you choose?

2. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. At least one of these rooms contains a lady.
  - II. A tiger is in the other room.
- The signs are either both true or both false. Which room should you choose?

3. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. Either a tiger is in this room or a lady is in the other room.
  - II. A lady is in the other room.
- The signs are either both true or both false. Which room should you choose?

4. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. Both rooms contain ladies.
  - II. Both rooms contain ladies.
- If the lady is in Room I, then the sign on the door is true, but if a tiger is in it, the sign is false. In Room II, the situation is the opposite: A lady in the room means the sign on the door is false, and a tiger in the room means the sign is true. Which room should you choose?

There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. At least one room contains a lady.
- II. The other room contains a lady.

If the lady is in Room I, then the sign on the door is true, but if a tiger is in it, the sign is false. In Room II, the situation is the opposite: A lady in the room means the sign on the door is false, and a tiger in the room means the sign is true. Which room should you choose?

6. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. It makes no difference which room you pick.
- II. There is a lady in the other room.

If the lady is in Room I, then the sign on the door is true, but if a tiger is in it, the sign is false. In Room II, the situation is the opposite: A lady in the room means the sign on the door is false, and a tiger in the room means the sign is true. Which room should you choose?

7. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The doors to the rooms bear signs:

- I. It does make a difference which room you pick.
- II. You are better off choosing the other room.

If the lady is in Room I, then the sign on the door is true, but if a tiger is in it, the sign is false. In Room II, the situation is the opposite: A lady in the room means the sign on the door is false, and a tiger in the room means the sign is true. Which room should you choose?

8. There are two rooms. Each room contains either a lady or a tiger, but it could be that there are tigers in both rooms, or ladies in both rooms. The signs have fallen on the doors:

- \_ This room contains a tiger.
- \_ Both rooms contain tigers.

When properly attached, a lady in Room I means the sign which should be on that door is true and a tiger in it means the sign should be false, and the reverse is true for

Room II. Which room should you choose?

9. There are three rooms, with a lady in one room and a tiger in each of the other two rooms.

I. A tiger is in this room.

II. A lady is in this room.

III. A tiger is in Room II.

At most one of the three signs is true. Which room contains the lady?

10. Again there are three rooms, with a lady in one room and a tiger in each of the other

two rooms. The sign on the door of the room containing the lady is true, and at least

one of the other two signs is false.

I. A tiger is in Room II.

II. A tiger is in this room.

III. A tiger is in Room I.

Which room contains the lady?

11. One of the three rooms contains a lady, another a tiger, and the third is empty. The

sign on the door of the room containing the lady is true, the sign on the door of the

room with the tiger is false, and the sign on the door of the empty room is either true

or false.

I. Room III is empty.

II. The tiger is in Room I.

III. This room is empty.

Which rooms contain what?