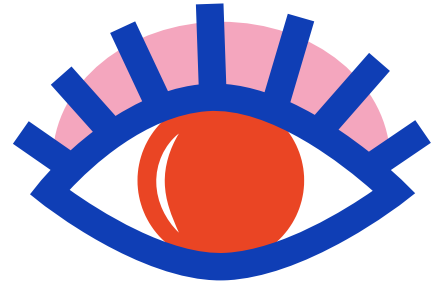# USE YOUR BRAIN

BRAIN TEASER

The Rocky Mountain Artists Puzzle

CAN YOU FIGURE OUT WHAT WILL HAPPEN IN THIS SILENT SITUATION?
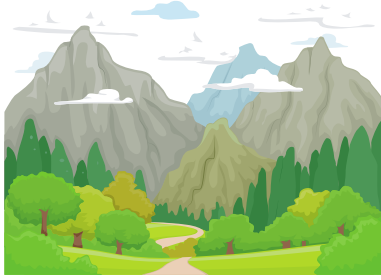
The Problem

Not many people know this, but there is a secret society somewhere deep in the Rocky Mountains. This group is filled with great artists, but the members are eccentric and superstitious.   Like most secret societies, this one has a number of strange rules:

- No one in the society is allowed to speak or otherwise communicate with words.
- No mirrors or other reflecting surfaces are allowed. No cameras or recording devices either.
- No one in the society can leave their secret headquarters with one exception.
- Red eyes are not allowed. No one can draw red eyes or have pictures of red eyes. Most importantly. no one in the society can have red eyes. If anyone in the society finds out they have red eyes they leave on the following night.
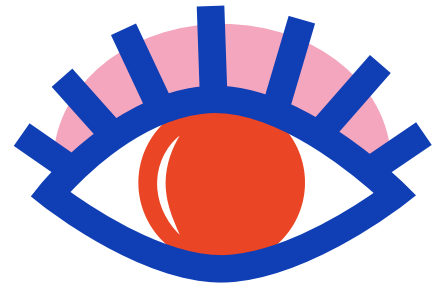
One day a reporter looking to do a story on this elusive group visits their headquarters. The reporter observes the group and takes notes, fascinated by them. At the end of the visit when all of the members of the society are gathered together for dinner, the reporter thanks everyone for letting him observe them. Than, right before leaving the reporter says, "But I have to ask, what's the story behind the red eyes I saw?" Of course no one answers the question, so the reporter leaves.

Assuming all of the people believe the reporter and are both very logical and follow the rules of the society what will happen next?

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Hint to get started

This is a tricky one to figure out. All of the members of the secret society are now aware that at least one person has red eyes. But the people in the society aren't blind. Most, if not all of the people already knew that some people have red eyes. The only person whose eyes they don't know about are their own (remember no mirrors!). So no one left the society before. But when the reporter said someone had red eyes, even though they didn't say who had the red eyes, the situation changes.

The Simple Solution

If only one person had red eyes, they will look around and see no one else with red eyes. By process of elimination, that means they must be the one with red eyes! So by the rules of the society, they will leave at night. If more than one person has red eyes no one will leave, right?

The Complete Solution

If no one leaves during the first night, than that means their must be at least two people with red eyes. So if on the second day one of the members sees only one person with red eyes, they must be the other one. So the two people who only see one other person will leave.

If no one leaves on the second night, than at least three people must have red eyes. So anyone who sees only two people with red eyes will leave on the third night. This pattern continues until the people with red eyes leave.

Bonus Question

What happens if the reporter lied?