

Puzzle – 03

<https://youtu.be/FhKUlleIdqo>

Q- Village of Demons and Sleeping Man Puzzle

Given a village with demons and a sleeping man, the man is always sleeping, never wakes up. Now a demon can eat the sleeping man, but after that he will fall asleep that is demon will sleep after eating man, now any demon can eat another sleeping demon.

If demons are very smart and would always choose to stay alive than to eat the man and risk their lives. so if initially there are 65 demons and 1 sleeping man .. What would happen in the village??

My Approach and Solution –

Consider there are only 1 demon and 1 human. Here, the demon eats human and fall into sleep since demon knows that nobody else is there to kill him.

If there are 2 demons and 1 human, nothing happens. This is because if a demon eats human and sleep then there is one more demon which eats the sleeping demon.

If there are 3 demons and 1 human, one demon eats the human. This is because demon which eats human knows there will be only 2 demons left which are awake after himself sleeps that will risk his life.

If there are 4 demons and 1 human, nothing happens. This is because if demon eats human and sleep then there are three more demon waiting to eat the sleeping demon.

If there are odd number of eaters and one sleeping target one of the eater that is demon will eat the target that is either sleeping demon or man.

If eaters are even(≥ 2) nothing will happen because if he eat the target he will become the target, Now eaters will be odd and according to earlier case target will be eaten.

Since there are 65 demons which are odd number of demons and if there are odd number of demons one demon eats the sleeping man. nothing happens after that.