FINAL EXAM PROBLEM - FIRE ANTS

Scientists have been observing the behaviors of ants in a colony.

One particular behavior is that of water accumulation. Ants have this capacity to carry a droplet of water in their peripherals and hand deliver it to wherever the colony is. However, as in humans, ants aren't created equal (although they pretty much look the same). Some ants are able to carry a "bigger" droplet than others.

As per observation, ants after carrying `WATER` back to the colony, follow another ant trail towards a `FOOD` source. After carrying `FOOD` back to the colony they again follow the trail towards the `WATER` source and then the alternation continues.

Some ants though, when done with carrying the droplet of `WATER` back to the colony `RETURN BACK TO THE WATER SOURCE` to get more water. This is rather odd since the pattern is to go from water->food->water->food and so on. But with careful observation, scientists uncovered that the return to the water source after successfully getting water is because upon arriving at the colony the water carried by the worker ant depletes in size. This may be because of the travel from the source to the colony. Hence, they have to return until they satisfy a naturally occuring measure `1618 microlitres` of water. Once they satisfy that, they now proceed to the alternate trail.

In the given ods file,
copy and paste the link onto your browser.
dcs.adnu.edu.ph/~neithan/fedpsprobg.ods

column A contains the size of the water droplet carried by the ant upon getting it from the water source, and column B contains the size of the water droplet carried by the ant upon arriving at the colony.

Count how many ants would have to return back to the water source before proceeding to follow the trail to the food source.