

# MUTO ONLINE

[WWW.MUTOONLINE.COM](http://WWW.MUTOONLINE.COM)

ONLINE LESSONS ON YOUTUBE SEARCH MUTO ONLINE

## ITEM 3

A casual worker at Namungona sewage treatment plant was given a pack of pellets of substance W to be used to treat sewage. On the pack, it is noted that every 500cm<sup>3</sup> of sewage requires 0.67moles of W to be purified. On the same pack, it is also indicated that every 2.6g of gaseous substance W occupies 1.7577 litres of space at STP. Further still, the total weight of the pack was noted as 50,000g.

Among the cautions on the pack, was; “do not expose substance W to any calcium containing substance” as it reacts as follows. “ $\text{Ca}_{(s)} + \text{W}_{2(s)} \longrightarrow \text{CaW}_{2(s)}$ ”. However, she failed to estimate the volume of sewage that required a single pack of W. She has approached you for help.

### Task.

As a chemistry learner with enough knowledge, make a presentation with

- An explanation of the category of a substance W is.
- The guidelines the casual worker can use to treat the sewage.
- Challenges associated with repeated use of such substances to the environment.

**(1moles of a gas occupies 24ltrs at STP)**