How many grams of calcium oxide (CaO) would be needed to neutralise 0.5 litre of battery acid (H_2SO_4) with a concentration of 0.25mol/L?
Given the atomic masses:
Ca = 40 and O = 16

Solution:

1.$CaO+H_2SO_4=CaSO_4+H_2O$

2.$C=n/V$;

$n=C\times V$;

$n(H_2SO_4)=0.25\times0.5=0.125$ mol.

3.$n(H_2SO_4)=n(CaO)$

4.$m=n\times M$

$M(CaO)=40+16=56$ gram/mol

$m(CaO)=0.125\times56=7$ grams

Answer:$m(CaO)=7$ grams.