Question # 83572, answer

CaO+H2O=Ca(OH)2. A 3.50 g sample of CaO is reacted with 3.38 g of H2O. how many grams of Ca(OH)2 are Produced?

Answer:

1) Number of moles of CaO = mass/MW = 3.50 g/ 56.1 g/mole = 0.06 moles
2) Number of moles of H2O = 3.38 g/ 18 g/mole = 0.188 moles
3) CaO is a limiting reagent. Number of moles Ca(OH)2 = number of moles of CaO = 0.06 moles
4) Mass of Ca(OH)2 = MW x number of moles = 0.06 moles x 74.1 g/mole = 4.45 g