Answer on the Question #81648 – Chemistry – General Chemistry

At first, let's make equation of reaction:

$Mg_3N_2 + 6H_20 = 3Mg(OH)_2 + 2NH_3$

$m(H_20) = 5.93g$, $m(Mg(OH)_2) = 6.53g$;

We don't have accurate question, so let's fing mass of Mg_3N_2 and NH_3:

1) $n(Mg(OH)_2) = 6.53/58 \sim 0.113$moles;

So, 1 mole (Mg_3N_2) = 3 moles ($Mg(OH)_2$), so, $n(Mg_3N_2) = 0.113/3 = 0.038$mol;

$m(Mg_3N_2) = 0.038 * 100 = 3.8g$;

2) As I make higher, fing $m(HN_3)$:

$n(H_2O) = 5.93/18 = 0.33$ mol;

From fraction 6 / 2 or 3 / 1, $n(NH_3) = 0.11$mol and $m(NH_3) = 0.11 * 17 = 1.87g$.