An ore contains Fe3O4 and no other iron. The iron in a 35.82 gram sample of the ore is all converted by a series of chemical reactions to Fe2O3. The mass of Fe2O3 is measured to be 28.3 grams. What was the percent Fe3O4 in the sample of ore? Answer in units of %.

$2Fe_3O_4 + [O] = 3Fe_2O_3$
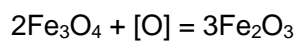
m{ Fe_3O_4) = m(Fe_2O_3) / M(Fe_2O_3) / 3 * 2 * M(Fe_3O_4) = 28.3 / 160 / 3 * 2 * 232 = 27.36 g

Percent of the Fe_3O_4 = 27.36 / 35.82 * 100 = 76,4%