

1 Determine the number of moles present in each of the following:

a 2.3 g of sodium

f 2.5 g of Na_2CO_3

b 0.32 g of O_2

g 15.6 g of $\text{Cu}(\text{NO}_3)_2$

c 1.0 g of CH_4

h 2.7 g Fe_2O_3

d 0.10 g of SO_2

i 3.0 g $(\text{NH}_4)_2\text{SO}_4$

e 4.0 g of N_2

2 Work out the mass of each of the following:

a 3.0 mol NaOH

f 0.85 mol $\text{Al}_2(\text{SO}_4)_3$

b 0.10 mol C_3H_8

g 0.600 mol CaCl_2

c 0.400 mol CuSO_4

h 2.40 mol NH_4NO_3

d 100.0 mol SO_3

i 2.0 mol CaCO_3

e 0.27 mol HNO_3

3 Calculate the percentage by mass of carbon in each of the following:
[4]

a CO_2

c $\text{C}_6\text{H}_5\text{NO}_2$

d

b C_2H_6

$\text{C}_6\text{H}_5\text{C}$
 OCH_3