$C_nH_xO_y$

M (CO_2) = 44 , A_r (C) = 12

44 g CO_2 – 12 g C

11.8 g CO_2 – “Z” g C

Z = 11.8*12/44 = 3.218 g C

M (H_2O) = 18, A_r (H) = 1

18 g H_2O – 2 g H

2.41 g H_2O – “K” H

K = 2.41*2/18 = 0.268 g H

4.56 g – 0.268 g – 3.218 g = 1.074 g O

A_r (C) = 12, A_r (H) = 1, A_r (O) = 16

n:x:y = 3.218/12 : 0.268/1 : 1.074/16 = 0.268 : 0.268 : 0.067 = 4 : 4 : 1

n=4, x=4, y=1

C_4H_4O