

given that 1 mol of carbon weighs 12.0g how many atoms are there in 24.0g of magnesium

$$v(Mg) = \frac{m(Mg)}{M(Mg)}$$

$$v(Mg) = \frac{24}{24} = 1mol$$

If 1 mol of Carbon contains 6.02×10^{23} atoms, then 24 g of Magnesium (1 mol) contains 6.02×10^{23} atoms

24 g of Magnesium = 6.02×10^{23} atoms