

3 The mole — Part 2 — Answers

Answers

Work through these after trying the questions yourself.

3.1 (a) $12 + 2(16) = 44$ \ (b) $2(1) + 16 = 18$.

3.2 6.02×10^{23} .

3.3 $n = m/M = 46/23 = 2$ mol.

3.4 $n = 88/44 = 2$ mol.

3.5 $2 \times 6.02 \times 10^{23} = 1.204 \times 10^{24}$ particles.

3.6 $48 \text{ g Mg} = 48/24 = 2$ mol. The ratio Mg : MgO is $2 : 2 = 1 : 1$, so 2 mol of MgO forms. $M_r(\text{MgO}) = 24 + 16 = 40$, so mass = $2 \times 40 = 80$ g.