$n\ (H_2S) = 96.7\ moles$

$V_M(H_2S) = 44.8\ m^3/mol$

$V_M(O_2) = 67.2\ m^3/mol$

$n\ (O_2)-?$

96.7 moles   x moles

$$2H_2S + 3O_2 = 2H_2O + 2SO_2$$
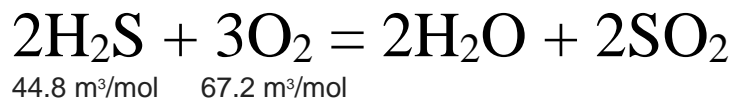
44.8 m³/mol   67.2 m³/mol

$$n\ (O_2) = \frac{n\ (H_2S) * V_M(O_2)}{V_M(H_2S)}$$

$$n\ (O_2) = \frac{96.7\ moles * 67.2\dfrac{m^3}{mol}}{44.8\dfrac{m^3}{mol}} = 145.05\ moles$$

Answer: 145.05 moles of oxygen

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