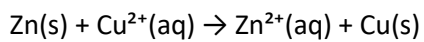


Answer on Question #81870 - Chemistry - General Chemistry

Question:

How much zinc [At. Wt. = 65.41] in grams would be needed to produce 300.00g of copper metal

Solution:



$$n(\text{Zn}) : n(\text{Cu}) = 1 : 1;$$

$$n(\text{Cu}) = m/M = (300 \text{ g}) / (63.55 \text{ g/mol}) = 4.72 \text{ mol};$$

$$n(\text{Zn}) = n(\text{Cu}) = 4.72 \text{ mol};$$

$$m(\text{Zn}) = (4.72 \text{ mol}) \times (65.41 \text{ g/mol}) = 309 \text{ g}.$$

Answer: 309 g.