

A, Z and charge count mat

Use only the A, Z and charge given for one paper species.

GIVEN

Element/name: _____ A: _____ Z: _____

Charge q: _____ (blank charge = neutral only if task says so)

DERIVE

1 Protons $p = Z$ $p =$ _____

2 Neutrons $n = A - Z$ $n =$ _____

3 Electrons $e = Z - q$ $e =$ _____

4 Reverse checks: $p + n = A$; $p - e = q$

Charge is in elementary-charge units: 2+ means $q = +2$.

WORKED NEUTRAL EXAMPLE

Carbon-12: A 12, Z 6, q 0.

$p = 6$; $n = 12 - 6 = 6$; $e = 6 - 0 = 6$.

Checks: $6 + 6 = 12$; $6 - 6 = 0$.

A is an integer count, not decimal standard atomic weight.