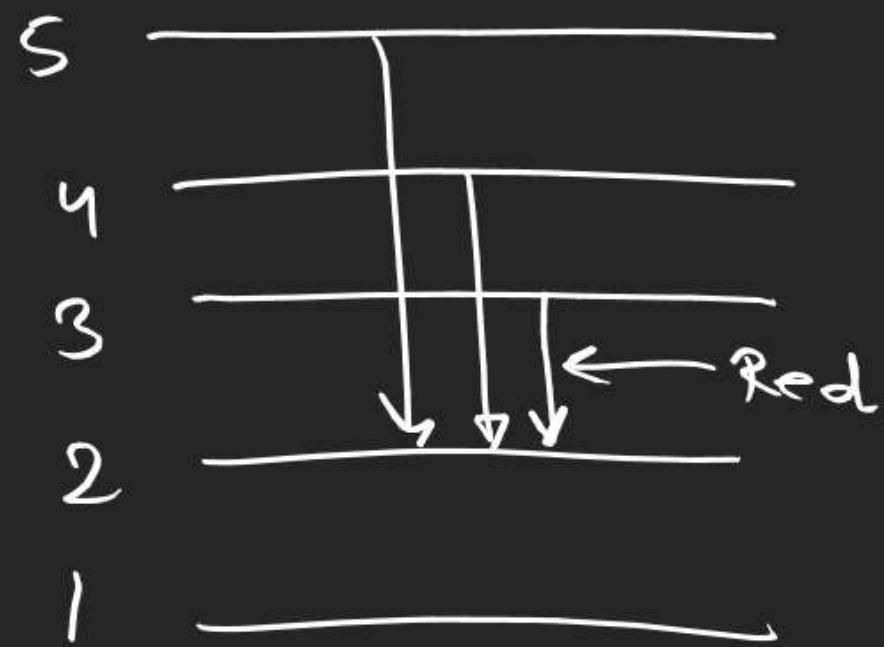


(7)



(12)

$$V = 300$$

$$\Delta V = 300 \times 0.001 \times \frac{1}{100}$$

(13)

$$\underline{13.6 \text{ eV/atom}}$$

$$= -1.312 \times 10^6 \times \frac{z^2}{n^2}$$

(16)

$$\frac{242 \times 10^3}{N_A} = \frac{hc}{\lambda}$$

⑯ $\frac{hc}{355 \text{ nm}} = \frac{hc}{680} + \frac{hc}{\lambda}$

⑰ $2\pi \left(a_0 \frac{n^2}{Z} \right) = n\lambda$

$$\frac{2\pi a_0 \times 3}{\underline{\hspace{1cm}}} = \lambda$$

Redox reaction & equivalent concept:

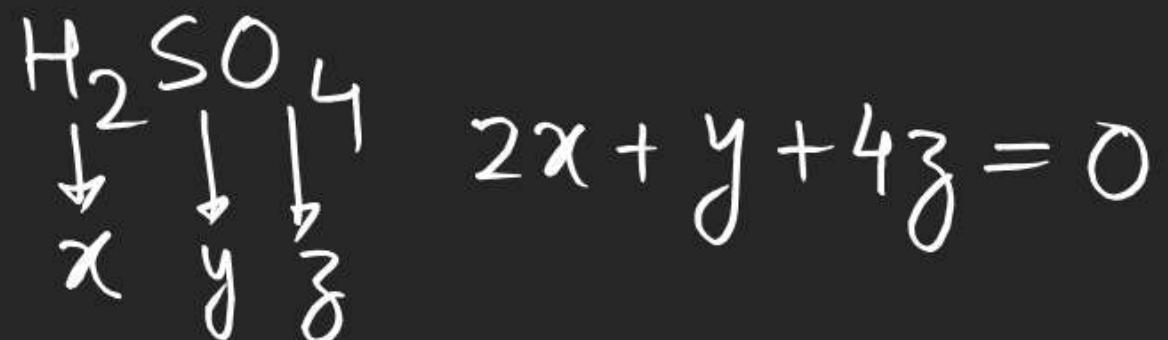
Oxidation number or oxidn state: →

It is equal to the real or imaginary charge present on an atom which the compound is considered 100% ionic.

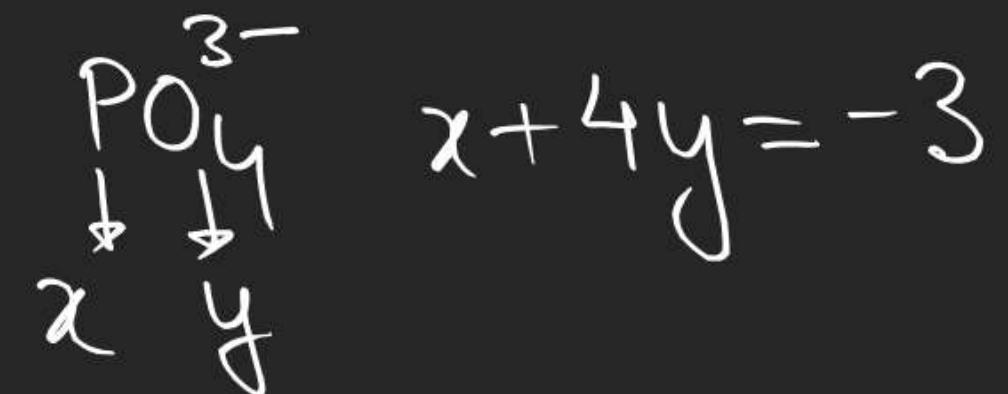


Rules to determine O. No. :-

① Sum of O. No. of all the atoms in a neutral molecules/compound is zero



② Sum of O. No. of all the atoms in an ion is equal to the charge on ion.



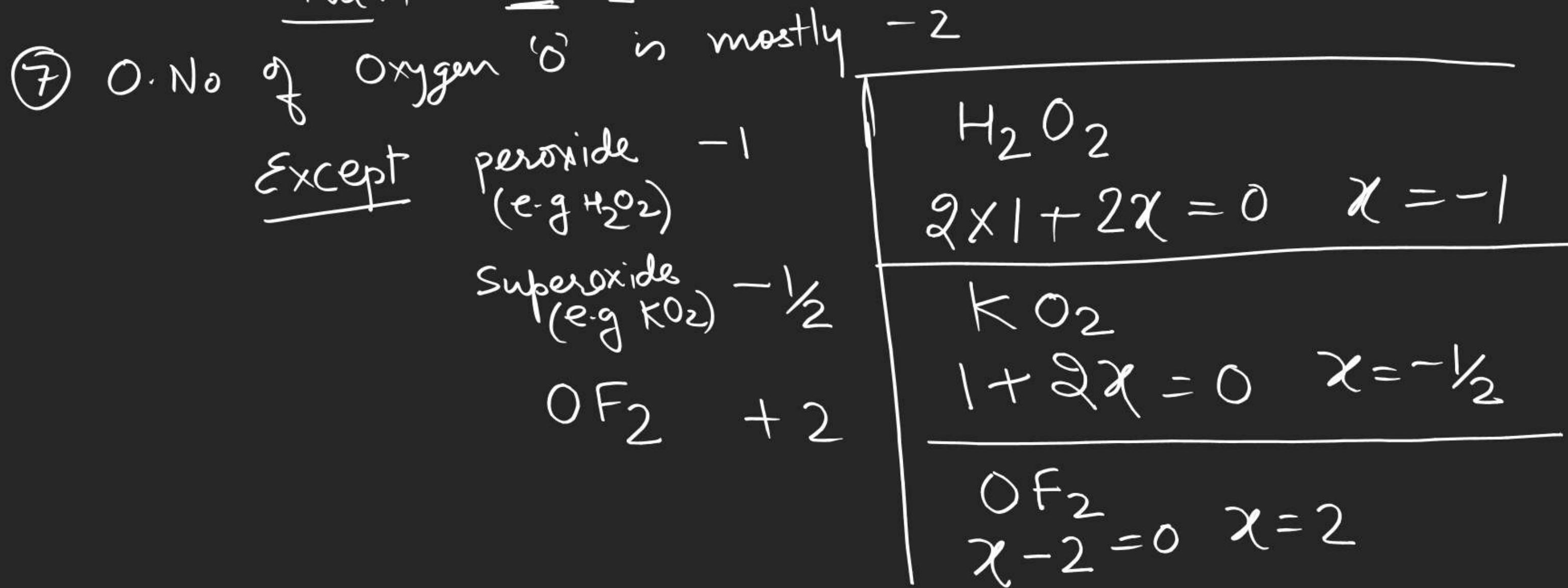
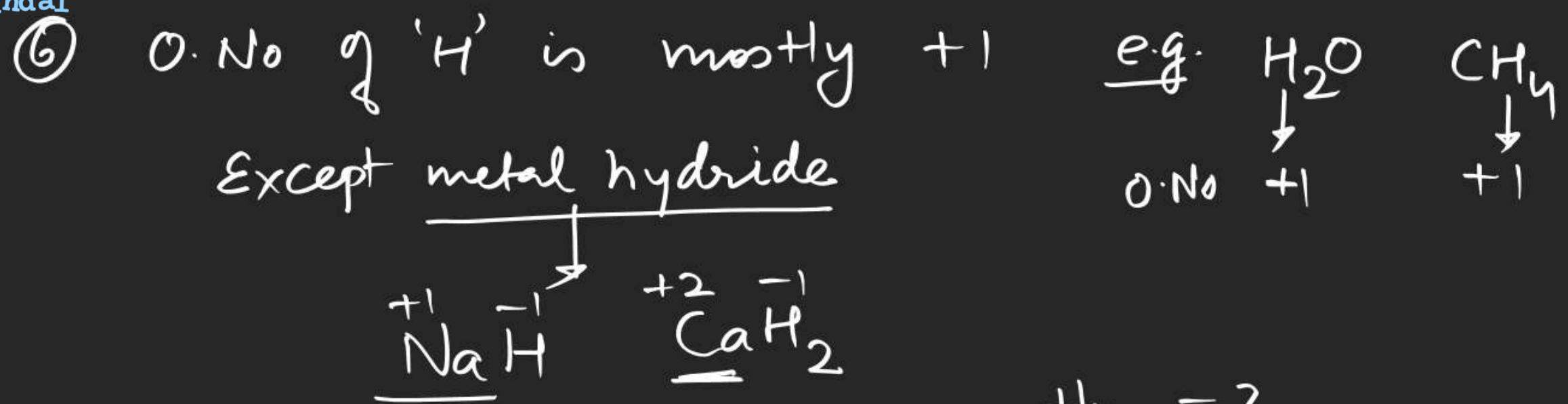
$$\text{H}_2 \rightarrow 2x = 0$$

$$\text{P}_4 \rightarrow 4x = 0$$

③ O. No. of 'F' in all its compound is '-1'
 e.g. HF, NaF, SF₆

④ O. No. of alkali metal is +1 always
 → Li, Na, K, Cs eg $\text{Na}^+ \text{F}^-$, CsCl
 +1 -1

⑤ O. No. of alkaline earth metal is +2 always.
 eg. Be, Mg, Ca, Ba, Sr.



⑧ for S & P block elements

max oxidation number = group number

min O. No. = group number - 8

group	<u>range of O. No.</u>
N → 5	-3 to +5

C → 4	-4 to +4
-------	----------

O → 7	-1 to +7
-------	----------



$$2 + x + 4(-2) = 0$$

$$x = 6$$



$$2 + 2x - 14 = 0$$

$$x = 6$$

FIND OXIDATION NUMBER OF UNDERLINED ELEMENTS



4



$$2 + 2x - 8 = 0$$

$$x = 3$$

oxalic acid



$$2x - 8 = -2$$

$$x = 3$$



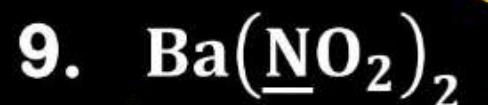
+6



$$x - 2 - 2 = 0$$



+5



$$2 + 2x - 8 = 0$$

$$x = 3$$



-3



0



-3



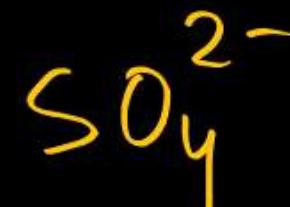
$$x = -1$$



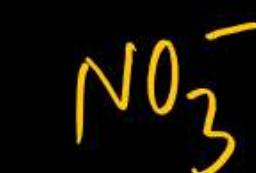
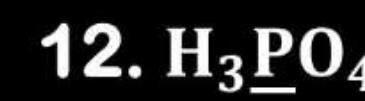
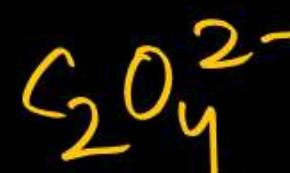
0



-2



+5



+5



7



$$\begin{array}{c} \text{Ba}^{2+} \\ \downarrow \\ \text{NO}_2^- \\ \downarrow \\ x - 4 = -1 \\ x = 3 \\ \hline \end{array}$$

FIND OXIDATION NUMBER OF UNDERLINED ELEMENTS



$$2x - 2 = 0 \\ x = 1$$



$$x - 12 = -4 \\ x = 8$$



$$+7 \quad +7$$



$$+3$$



$$+6$$



$$x = 6$$

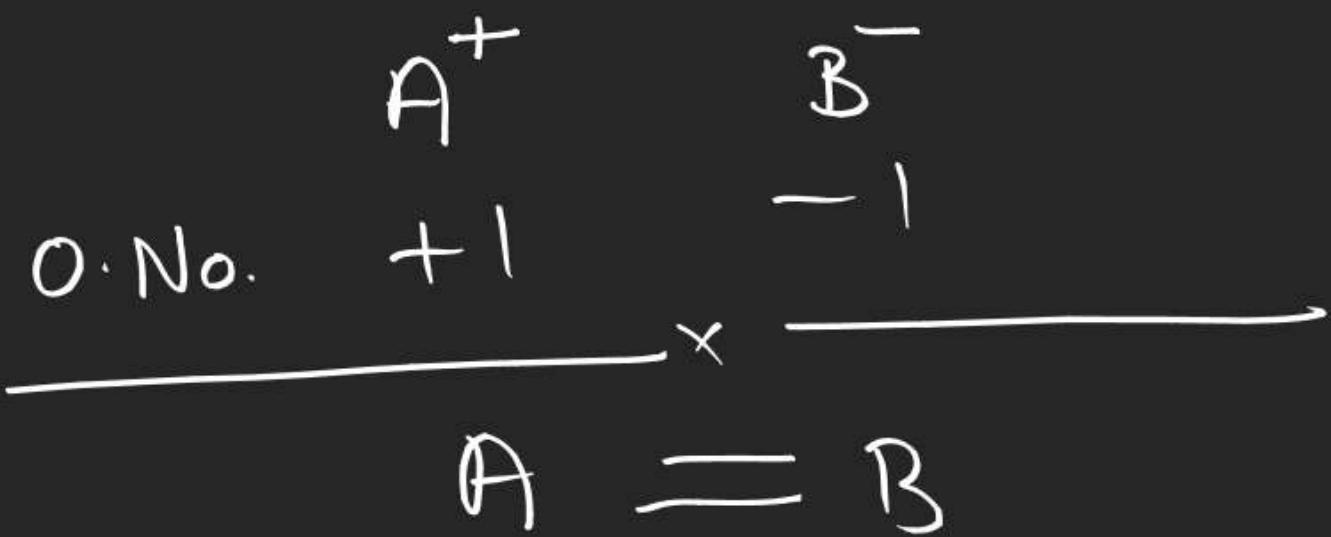
Potassium dichromate



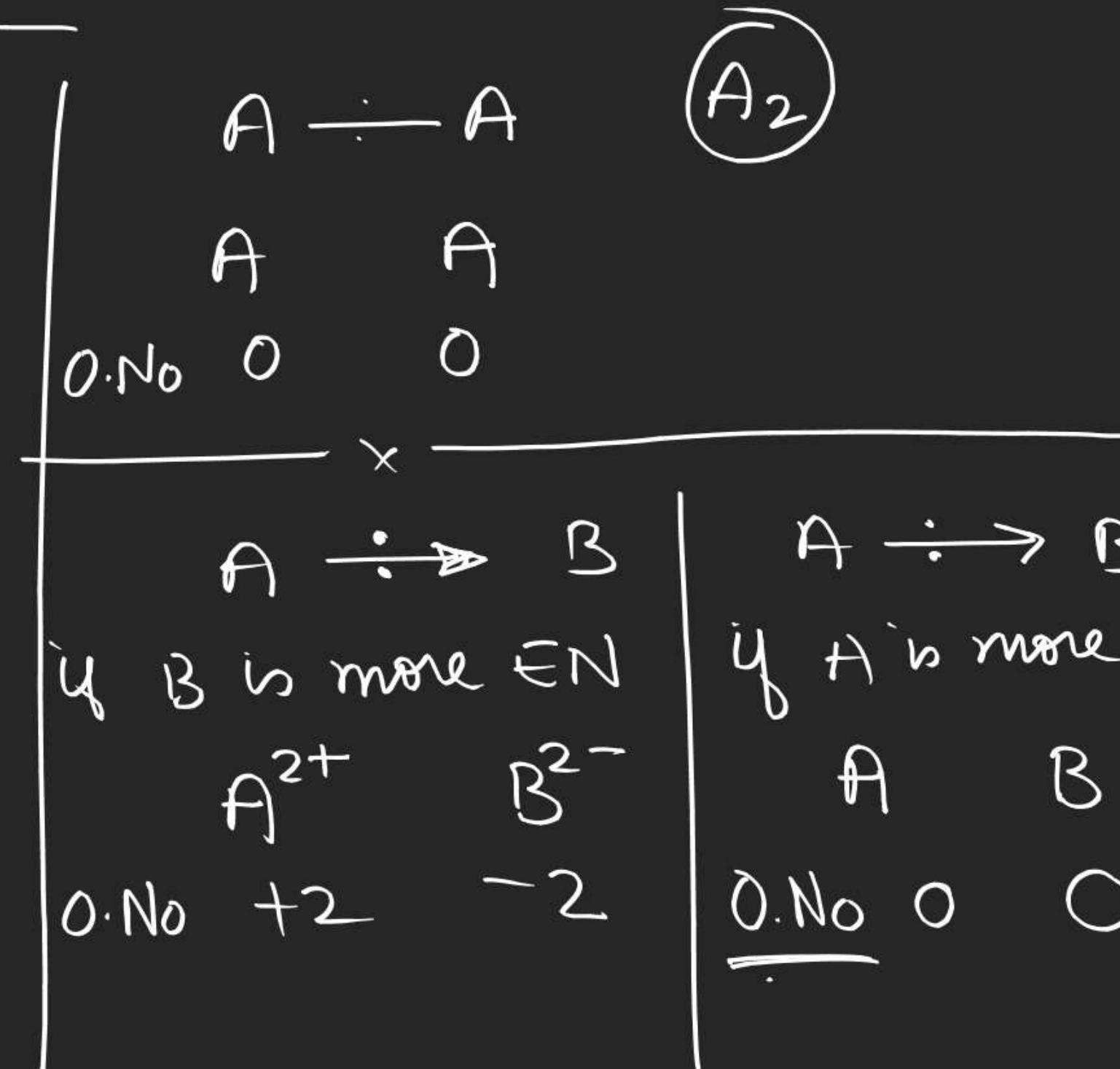
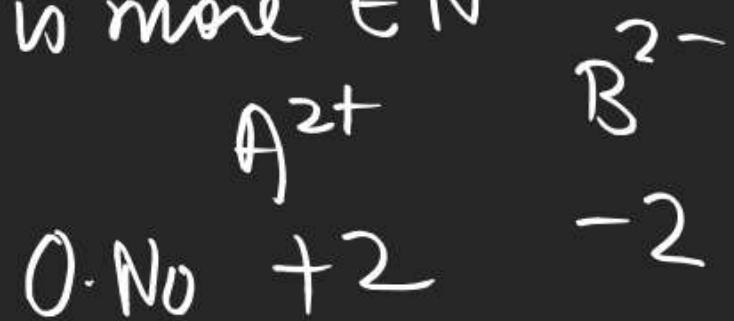
for covalent compound

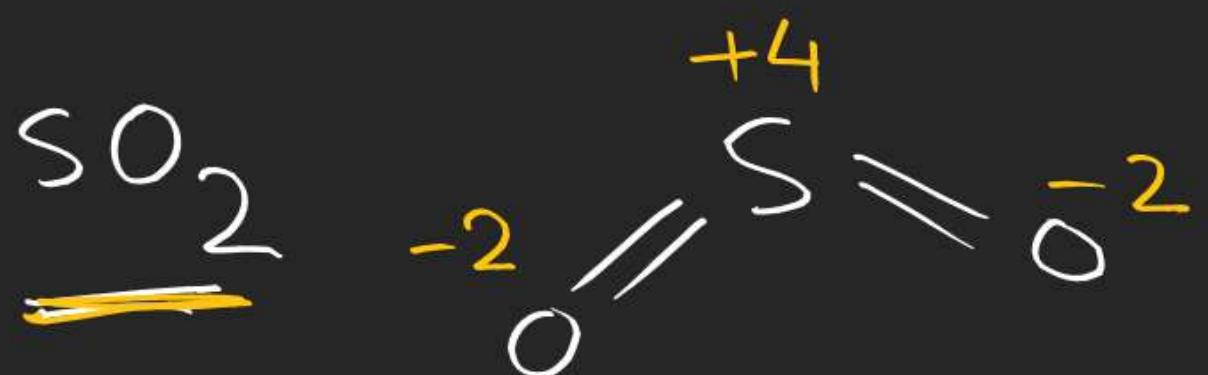
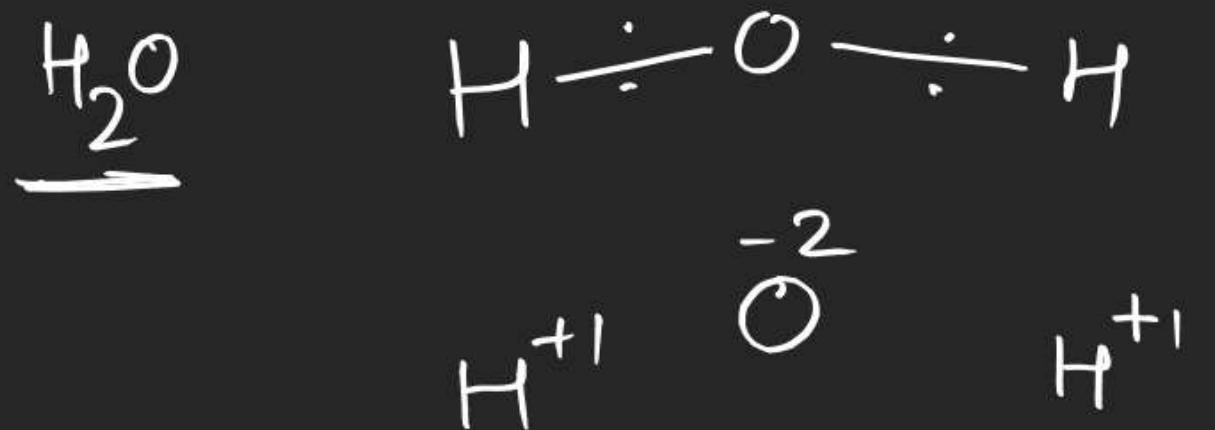


if B is more EN



if B is more EN





J Mains
J-Adv I-15