Redox Rxns and Equivalent concept

① **Oxidation number** :→ It is the real or imaginary charge present on an atom when the compound/Molecule is considered 100% ionic.

	Na^+	Cl^-
	+1	−1
O.NO	+1	−1

$\overset{\delta+}{H} \div \overset{\delta-}{Cl}$

	H^+	Cl^-	
	+1	−1	O.NO

E^+ is hypothetical concept

O.No by rules

Rules to determine oxidation number

1. Sum of the oxidation number of all the atoms in a neutral molecule / compound is zero

$KMnO_4$ $x+y+4z=0$

H_2O $2x+y=0$

H_2 $2x=0$

2. Sum of the oxidation number of all the atoms in an ion is equal to charge on ion.

PO_4^{3-} $x+4y=-3$

3. Oxidation number of F is –1 in all its compound. F_2

4. Oxidation number of alkali metals (group) is +1 in its all compound.

→ Li, Na, K, Cs

5. Oxidation number of alkaline metals is +2 in its all compound.

2nd group

6. Oxidation number of H is +1 in its compounds except metal hydride.

+1 -1
NaH

CaH_2

$2+2x=0$

$x=-1$

7. Oxidation number of 'O' is generally –2 except is peroxide, superoxide and OF_2 etc.

-1 -1/2

H_2O_2 KO_2

$1+2x=0$

$x-2=0$

8. Oxidation number of element may vary from n to n–8 (where 'n' is group number)

C → 4 −4

N → 5 −3

Cl → 7 −1

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FIND OXIDATION NUMBER OF UNADERLINED ELEMENTS

1.	$\underline{C}O_2$	**2.**	$H_2\underline{C}_2O_4$	**3.**	$\underline{C}_2O_4^{2-}$	**4.**	$H_2\underline{S}$	**5.**	$H_2\underline{S}O_4$
6.	$\underline{S}OCl_2$	**7.**	$\underline{N}_2O_5$	**8.**	$H\underline{N}O_3$	**9.**	$Ba(\underline{N}O_2)_2$	**10.**	$\underline{N}H_4^+$
11.	$\underline{P}_4(s)$	**12.**	$H_3\underline{P}O_4$	**13.**	$\underline{P}H_3$	**14.**	$\underline{Cl}^-$	**15.**	$\underline{Cl}_2$
16.	$H\underline{Cl}O_4$	**17.**	$\underline{Cl}_2O$	**18.**	$\underline{Xe}O_6^{4-}$	**19.**	$K\underline{Mn}O_4$	**20.**	$K_3\underline{Mn}F_6$
21.	$K_2\underline{Fe}O_4$	**22.**	Cr^{3+}	**23.**	$\underline{Fe}_{0.9}O$	**24.**	$\underline{I}_3^-$	**25.**	$K_3[\underline{Fe}(CN)_6]$
26.	$K[\underline{Co}(C_2O_4)_2(NH_3)_2]$			**27.**	$\underline{Ni}(CO)_4$	**28.**	$\underline{Fe}(CO)_5$	**29.**	$\underline{C}_{12}H_{22}O_{11}$
30.	$\underline{Fe}SO_4.(NH_4)_2SO_4.6H_2O$								

$Ba(NO_2)_2 \longrightarrow 2 + 2x - 8 = 0$

$x = 3$

Ba^{2+} NO_2^-

$x - 4 = -1$

$x = 3$

1-20 Exemplar

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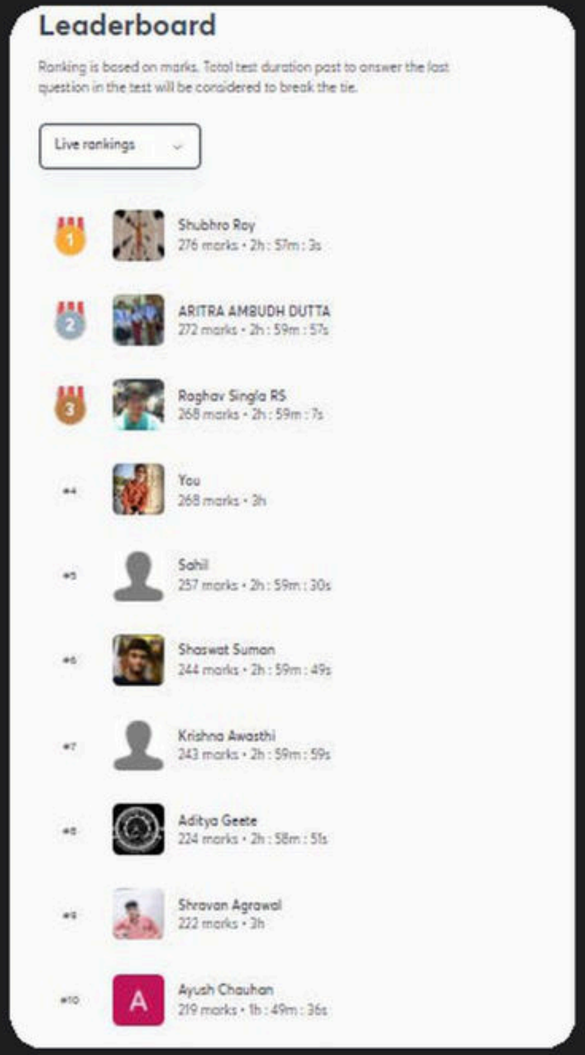
▲ 9 • Asked by Aaditya Ag...

Test



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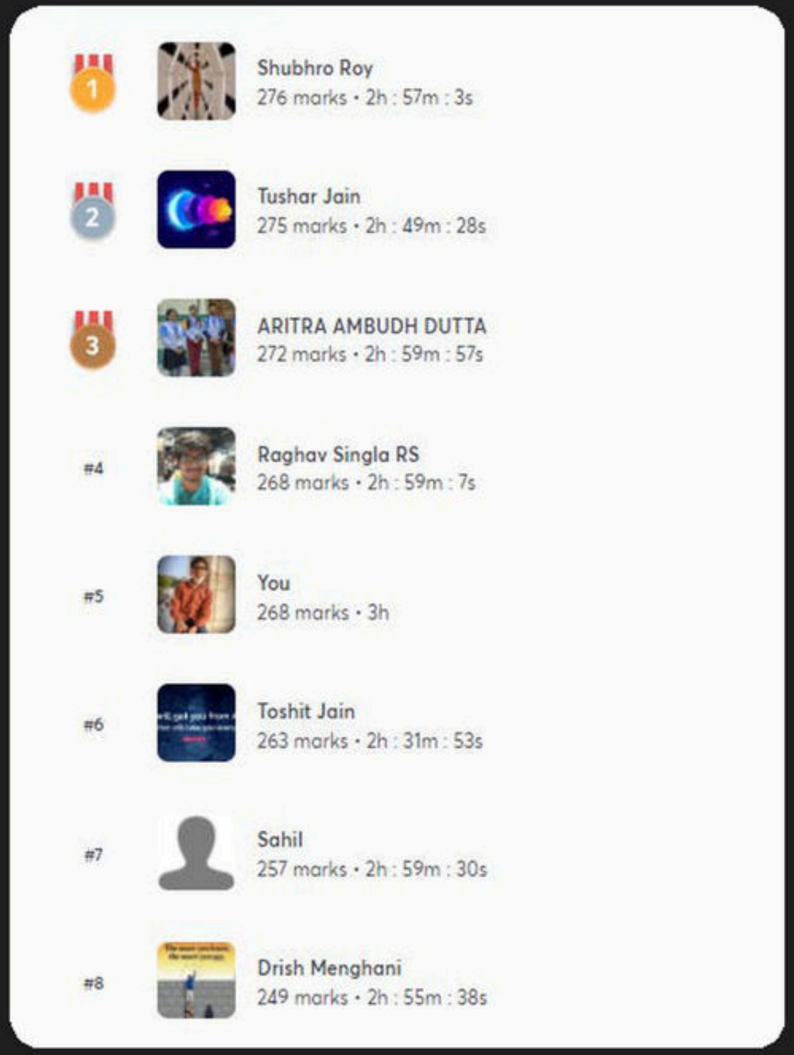
▲ 3 • Asked by Aaditya Ag...

ye wala dekhiye sir



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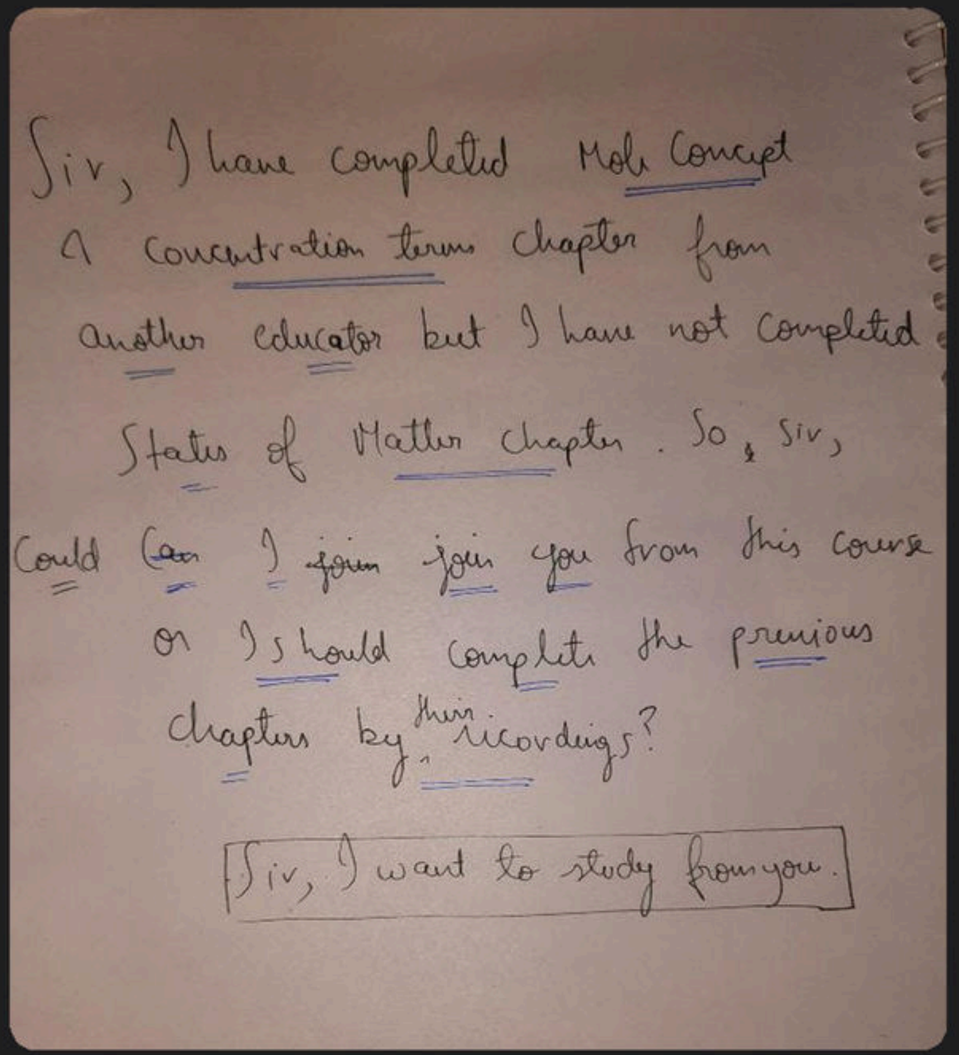
▲ 4 • Asked by Shaurya

Please help me with this doubt



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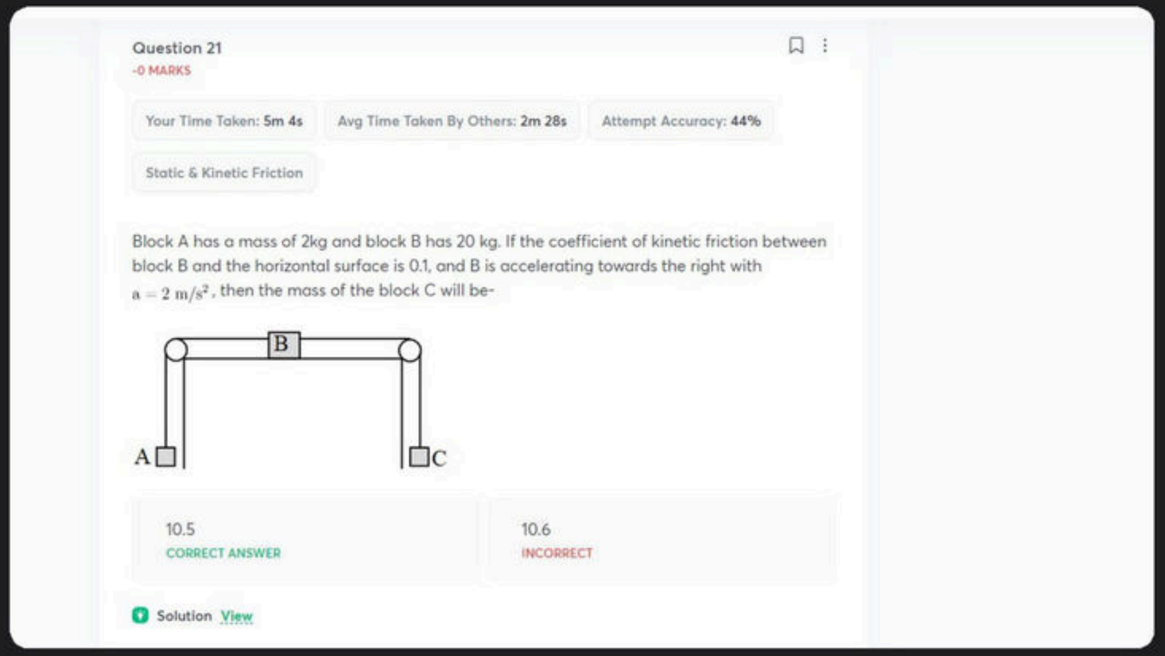
▲ 6 • Asked by Ankur

Sir integer type questions me Aise mistakes ho rahi hai kya karu



Question 21

-0 MARKS

Your Time Taken: 5m 4s | Avg Time Taken By Others: 2m 28s | Attempt Accuracy: 44%

Static & Kinetic Friction

Block A has a mass of 2kg and block B has 20 kg. If the coefficient of kinetic friction between block B and the horizontal surface is 0.1, and B is accelerating towards the right with $a = 2\ m/s^2$, then the mass of the block C will be-

10.5
CORRECT ANSWER

10.6
INCORRECT

Solution View

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▲ 3 • Asked by Divya Agra...

SIR MERE 3 TEST ME 106 , 149 , 77 :(SIR IMPROVEMENT KI JGH MARKS OR KAM HO GYE ME KYA KARU SIR :((((

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▲ 1 • Asked by Dwarkadhis...

Sir mere T1 mai 344. T2 mai 122 aur T3 mai 25 rank ayii all thanks to you sir pc ke sare crrt hua ...your teaching is best

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▲ 3 • Asked by Rakshit

sir i got infected by malaria and typhoid both aur sir docter ne 10 days ke liye bed rest krne ko bola hai but 10 days me to bohot jada backlog ho jayega sir please help.

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▲ 4 • Asked by Prathmesh

SIR 24TH OCTOBER KO NTSE STAGE 2 HAI , BUT USKI PREPARATION ME BOHOT TIME JAA RHA HAI AUR MUJHE IOC OC ME BHI DIKKAT HAI. TO KYA MAI STAGE 2 KI PREPARATION LEAVE KR DUN ?

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▲ 3 • Asked by Harsh

Sir muje 44 marks ka organic chemistry chodan pada because mene abhi tak OC bilkul nahi padha hai to usse cover kaise karu please help !!

10 days

4 hrs

12-13 hr

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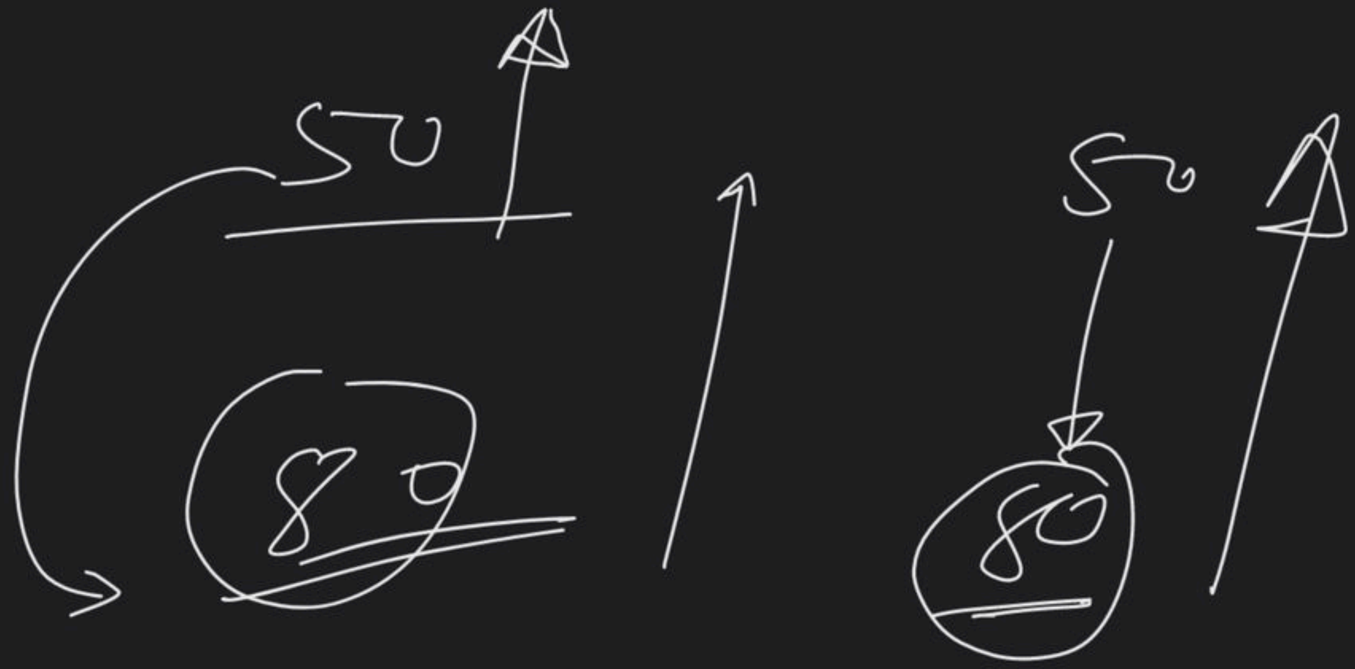
▲ 1 • Asked by Divyanshu

sir 180 se 31 ...thank you sir



100 meter

9.8 sec
9.84 sec
9.87 sec

10

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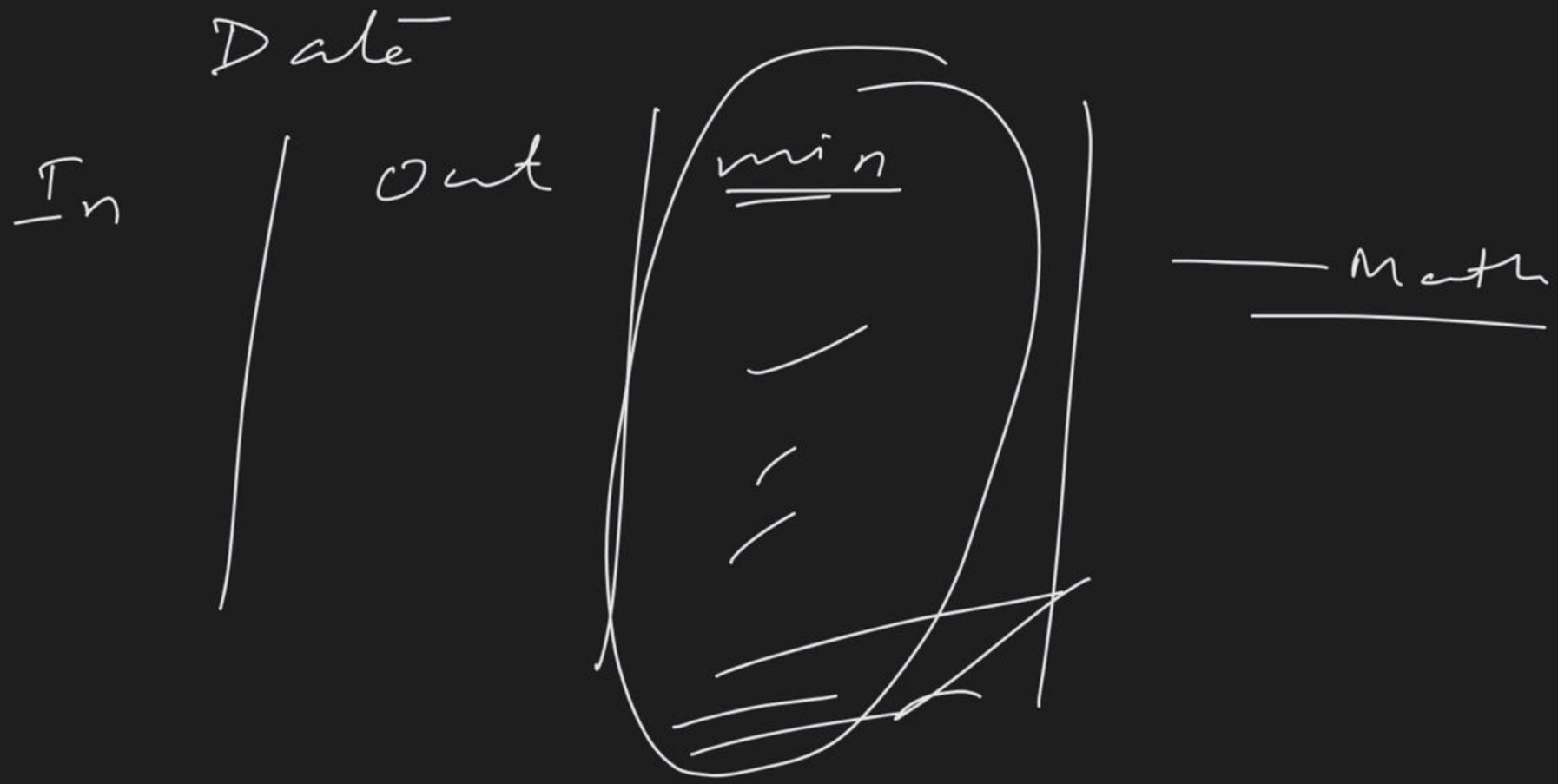
▲ 5 • Asked by Aman

Sir paper k time bhut ajeeb sa feel hota h bhut sweating hone lagti h aur dizziness feel hoti h sir
Is wajah se bhut q attempt hi ni hote sir kya karu 100 hi aaye papaer m:((