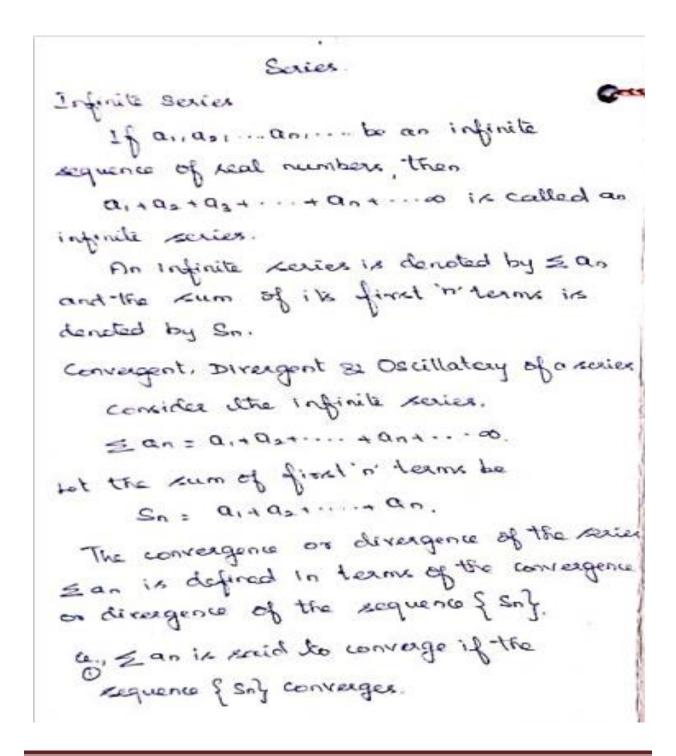




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TOPIC: 2.2 – SERIES: TYPES AND CONVERGENCE







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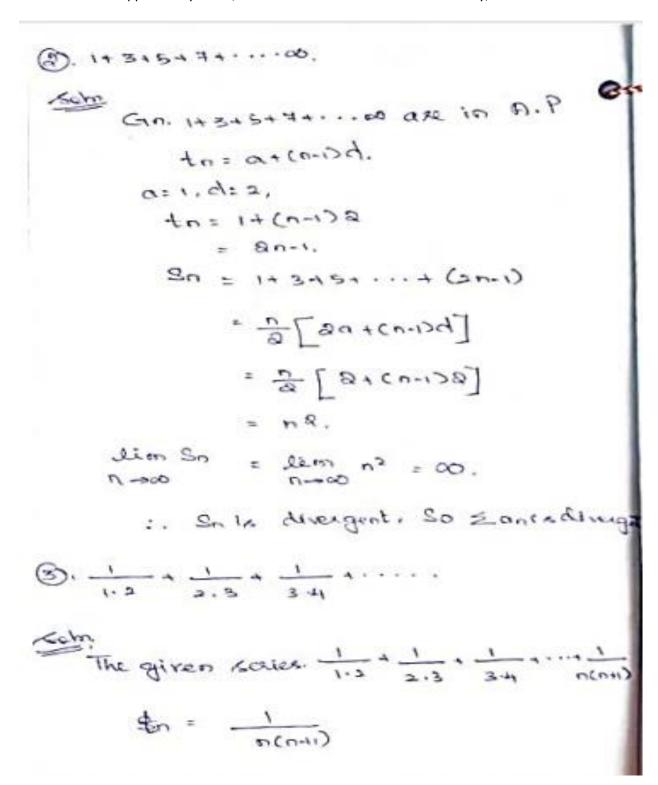
ozan is said to be diverge if the puence { sn} diverger. 1. = an in said to oscillatory if the sequence of say close not land to a unique semit as n+00. O. Examine the convergence of the review 142+34 40 4 00 . Calven. Zan: 142434 ... + n4 ... 00. 101 Sn = 1+2+ 3+ . . . + n. Bu = D(Udi) 11m Sn = 11m n(n+1) (1+1) con mile & = = 12m cn = 00. :. The Sn divergent ". Zan is also divergent.





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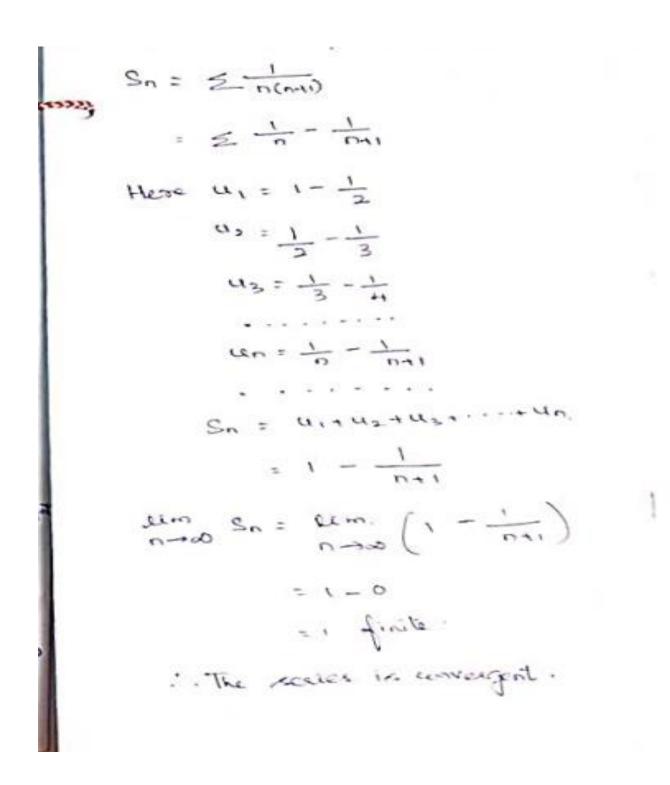






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Series of positive Learns:

- General properties:

 1. convergence of a Series remains unchanged
 by the replacement, inclusion con original about finit number of seem.
- 9. A series Lemains convergent, divergent (Or) oscillatory when each term of it is multiplied by a fixed number other than zero.
- 3. A series of positive terms either converges con diverges to too, onitting the negative Econy, the sun of dirst n Econs Lends to esterna finite limit (00) tou.

H. Every Sinit Series 23 a convergent series.

Sevier of positive term.

1. If all the terms after few negative terms in an infinite series are positive, buch a series is a positive term series.





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Serier of positive term.

1. If all the terms after few negative terms in an infinite series are positive, such a series is a positive term series. Eq: -10-6-1+5+12+20+ . - -

2. A sever of positive termy either Converger (or) diverges to ao, for the sum of first In Learn, one Eting the negative berm, Leads to estere a finite limit (on to)

3. Necestary condition for convergence. It a tre Lern series Zun is convergent, then him un=0 but the converge not the

4. Test for divergence.

If him unto, the series must be divergent.