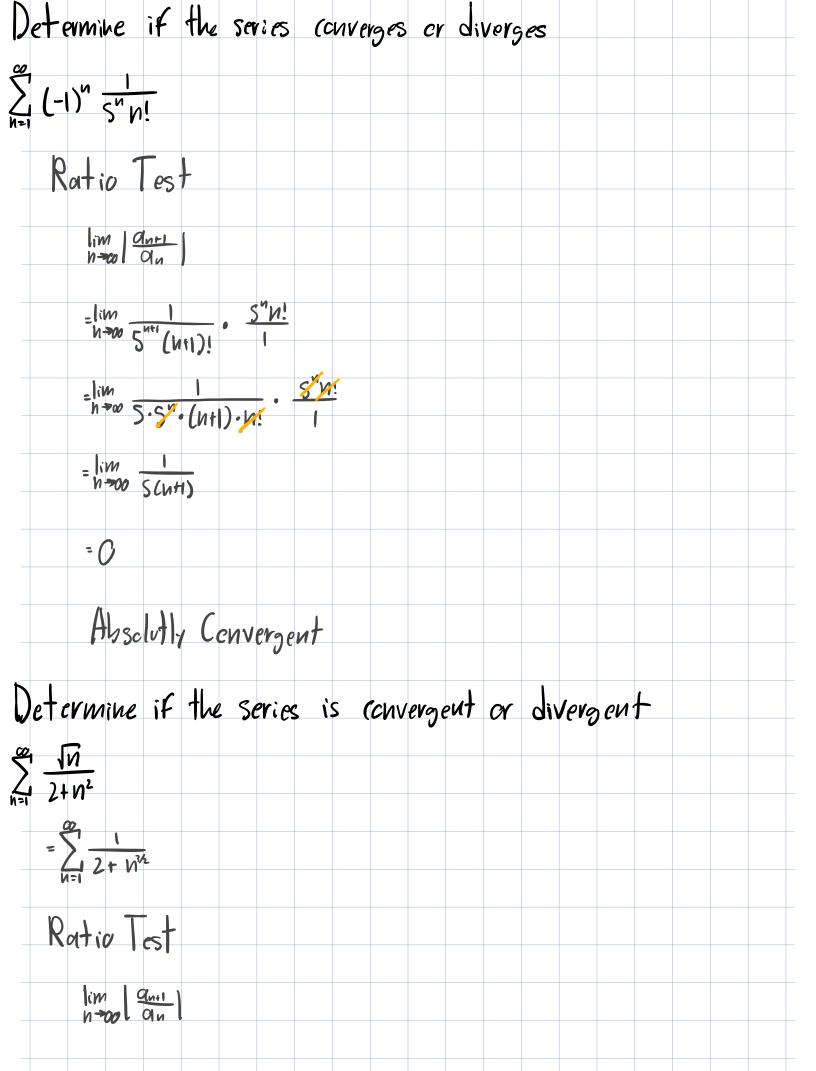
Determine if the	series co	nverges	cr div	erg es		
$\sum_{n=1}^{CO} \left(-1\right)^{n} \frac{N}{(n+3)\sqrt{n}}$						
(N+3) \n						
$=\sum_{N=1}^{\infty}\left(-1\right)^{N}\frac{\sqrt{N}}{N+3}$						
Ratio Test						
lim anti n=00						
= 1 im 1	ht3					
= lim NN+···	,					
z						
No Conclusi	on					
Alternorting Ser	ies Test					
lim n=co Oln						
$= \lim_{N \to a_0} \left(-1\right)^N \frac{\sqrt{N}}{N!}$	3					
= + • 0						
= Conditions	.11 . (
Conations	my convi	evges				

Determine if the Serie	s Converges or	Diverges	
$\sum_{n=1}^{\infty} \left(-1\right)^n \frac{1}{3n+2}$			
Ratio Test			
(in) 3n+2			
$= \lim_{n \to \infty} \frac{1}{3(n+1)+2} \cdot \frac{3n+2}{1}$	-		
= \lim \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
$= \lim_{n \to \infty} \frac{3n+2}{3n+5}$			
=			
No Cenclusian			
Alternating Series	Test		
lim o			
him oln			
= 1 m (-1) n 1 3 n+2			
= ± ()			
*Conditionally C	onvergent		

Determine if the series is	converg ent	or di	vergent	_	
$\sum_{n=1}^{\infty} (-1)^n \frac{N+3}{4n+6}$					
Ratio Test					
lim anti					
=\im \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					
$=\lim_{n\to\infty}\frac{4n^2+\cdots}{4n^2+\cdots}$					
=					
Wo Cenclusien					
Diveregence Test					
lim n-w Oln					
$=\lim_{N\to\infty} \left(-1\right)^{N} \frac{N+3}{4n+6}$					
= + 4					
Diverges					



$=\lim_{N\to\infty}\frac{1}{2+(N+1)^{3/2}}=\frac{2+N^{2/3}}{1}$	
$= \lim_{N \to \infty} \frac{N^{3/2} + \cdots}{N^{3/2} + \cdots}$	
No Conclusion	
Comparison Convergence Test	
$Q_{N} = \frac{\sqrt{N}}{2 + N^{2}}$	
$Q_{N} = 2 + N^{2}$	
$b_{N} = \frac{\sqrt{N}}{N^{2}}$	
an ≤ bn for all R so an converges it bn does	
an = bn fcr all in so an converges it by ace	3
$D_{N} = \frac{1}{N^{2}}$	
En by is a series and Diverges	
hai no series and Diverges	
Determine if the series converges or diverges	
$\sum_{n=0}^{\infty} \frac{(-16)^n}{n!}$	
$=\sum_{n=0}^{N=0}\left(-1\right)^{N}\frac{N!}{n!}$	
u zo N:	
Ratio Test	

Im anti			
, , , , , , , , , , , , , , , , , , ,			
=1rm 16 n+1 n=0 (n+1)!	16"		
= lim 16.16.	16 T		
= 1 im 16 N+1			
A			
= ()			
A)			
Absolutly C	cnvergent		
		1	
Determine if the	series converge	es er diverges	
$\sum_{N=1}^{\infty} \frac{N^{2}}{(n+4)^{2}N}$ $= \sum_{N>1}^{\infty} \frac{N}{N^{2}+8n+16}$			
4 (n+4) n			
$= \sum_{i=1}^{\infty} \frac{N}{\log^2 R_i + 1/2}$			
N>1			
Limit Compa	visen Test		
·			
an = 12+8n+16	,		
$g_N = \frac{N}{N^2}$			
	102		
1im N N=00 N2+8n+16	N		
1, 1436			
= (M N3+			

-	:							
	•							
	D 11							
	Both &	eries	CONVEY	ge er	divero	10		
,	$N = \frac{N_2}{N}$							
	VI VI							
	= h'							
	P Serie	SOM	Day	PVOS				
	. 50710							
10 1	1 h							
15c1	h Diver	rge						
Detevia	like if	lo Seri	es con	Veraes	er diver	200		
				,,,,,				
Σ (-1) ^N	<u>(n!)</u> 2							
Z (-1)	(gn):							
.0								
R _{ol} -	tio Test	-						
	lim an+1 n = 00 an	1						
	n-00 an	l						
	1 (()	1)2	8. 11					
•	lim ((n+1)))! . (8N)!					
			N!)					
-	1 m (N.V	1!)2 (8	(n)!					
	N=00 (8n+	8)! (1	V;) ₅					
	1 m 1/2 ·	(4)	1(4)					
	N -00 (414 t	8)1 . (1	17 ·					
			(,)					
	lim N2(8 N→00 (8n+	<u>́и)!</u>						
	N->00 (But	3)!						

=lim _		N,	(8vi):						
n-00 (5	847: (8n+	8)(8n+7)	(8n+b)(8	n+5)(8n+4)	•••			
= 0									
Δla	111.	Conver							
111750	NOT LY	Lonver	gent						