## Formula List

00	lacel	Inverse	
	00	aplace	aplace/striverse

2) 
$$L[e^{-\alpha+}] = 1 = |f| |f| = e^{-\alpha+}$$
  
 $S-9 = |f| |f| = e^{-\alpha+}$ 

4) 
$$L [\cos \alpha t] = S = > L^{7} [S] = \cos \alpha t$$
  
 $S^{2} + \alpha^{2}$   $[S^{2} + \alpha^{2}]$ 

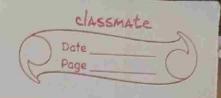
5) 
$$L[sinhad] = \alpha \Rightarrow L^{-1}\begin{bmatrix} 1 \\ 5^2-a^2 \end{bmatrix} = sinhad$$

6) 
$$L[\cos hat] = S = L^{-1}[S] = \cos hat$$

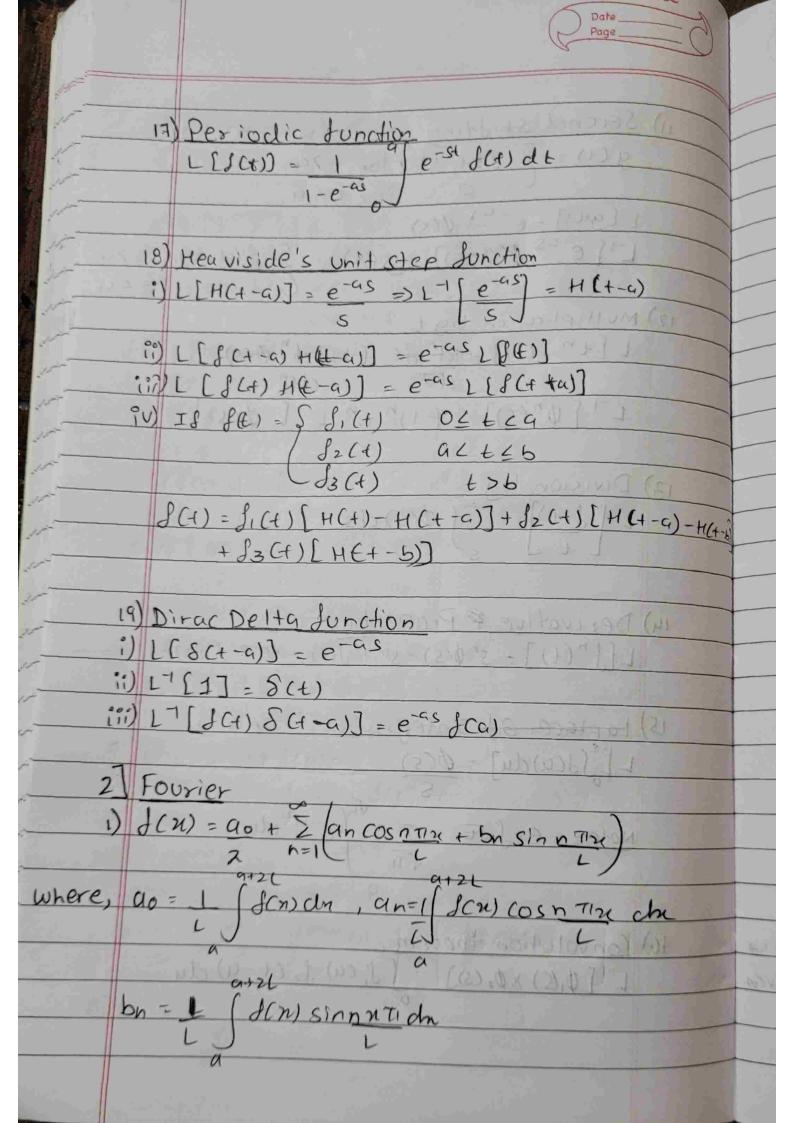
7) 
$$L[t^n] = n! = SL^{-1}[l] = t^n$$

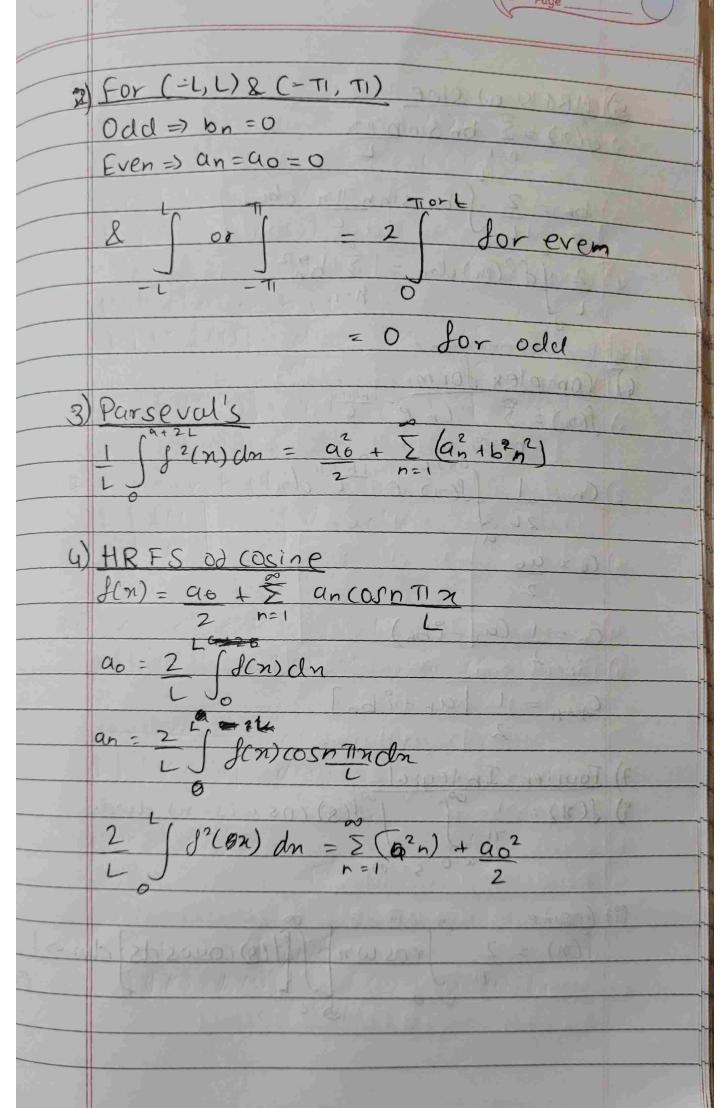
$$S^{n+1}$$

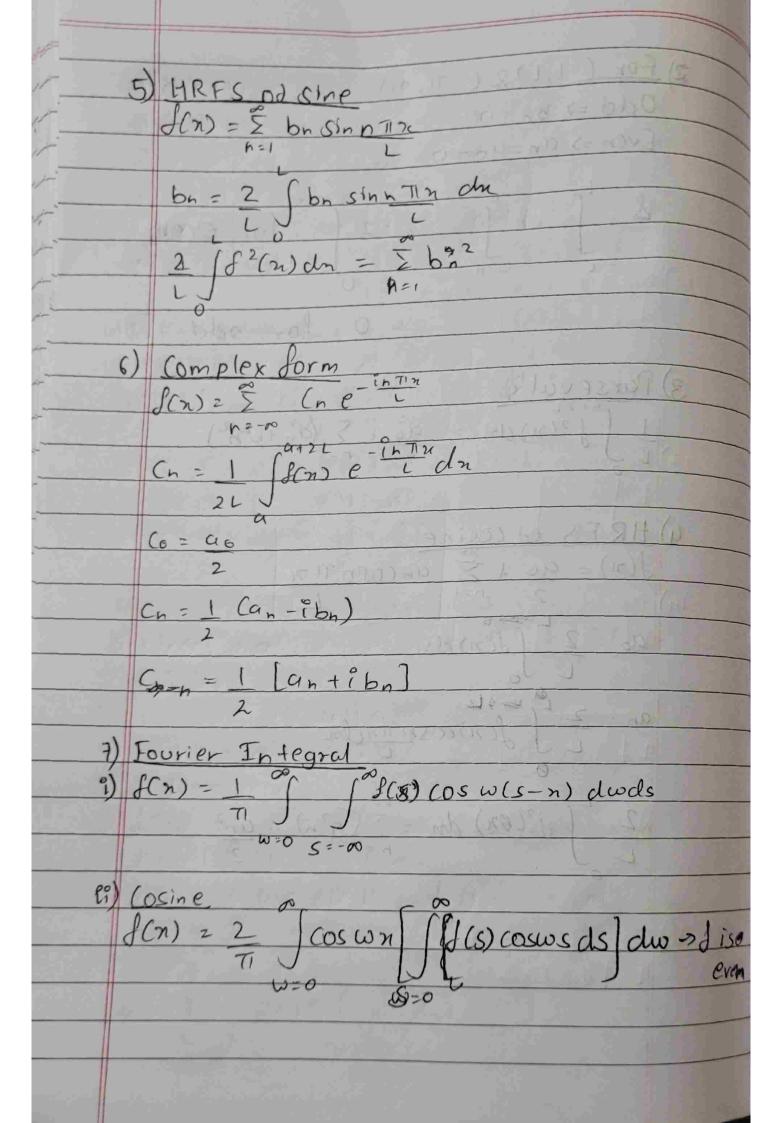
$$S^{n+1}$$

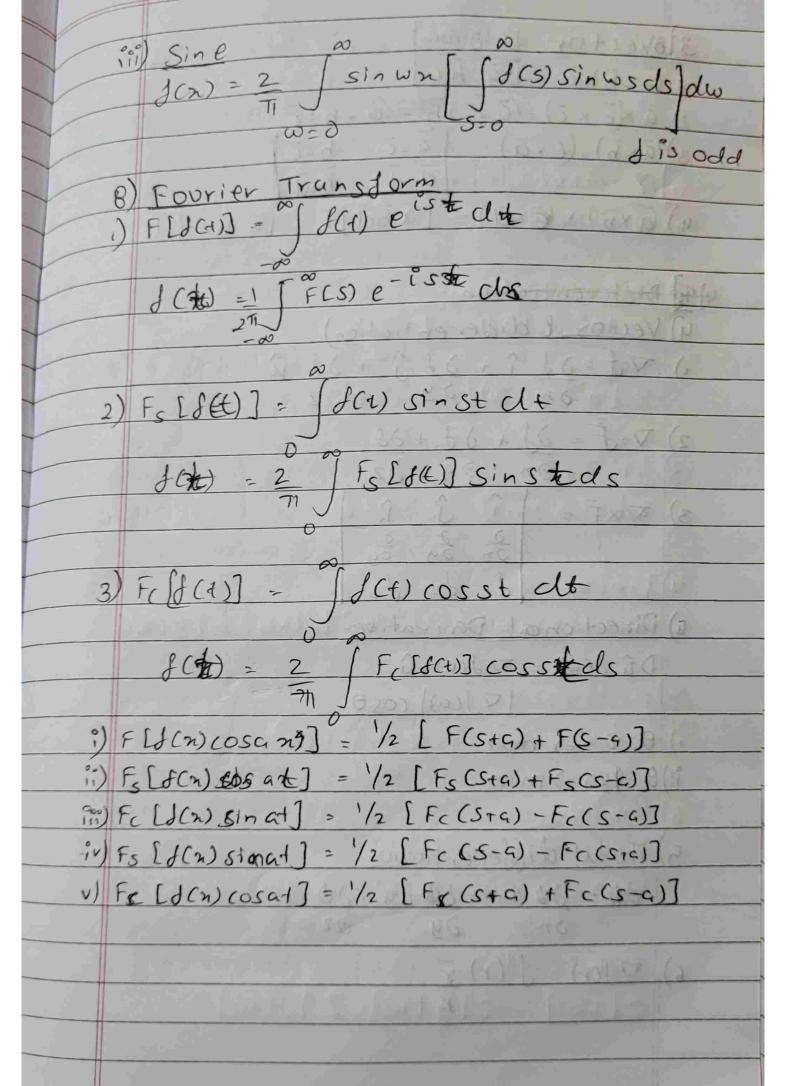


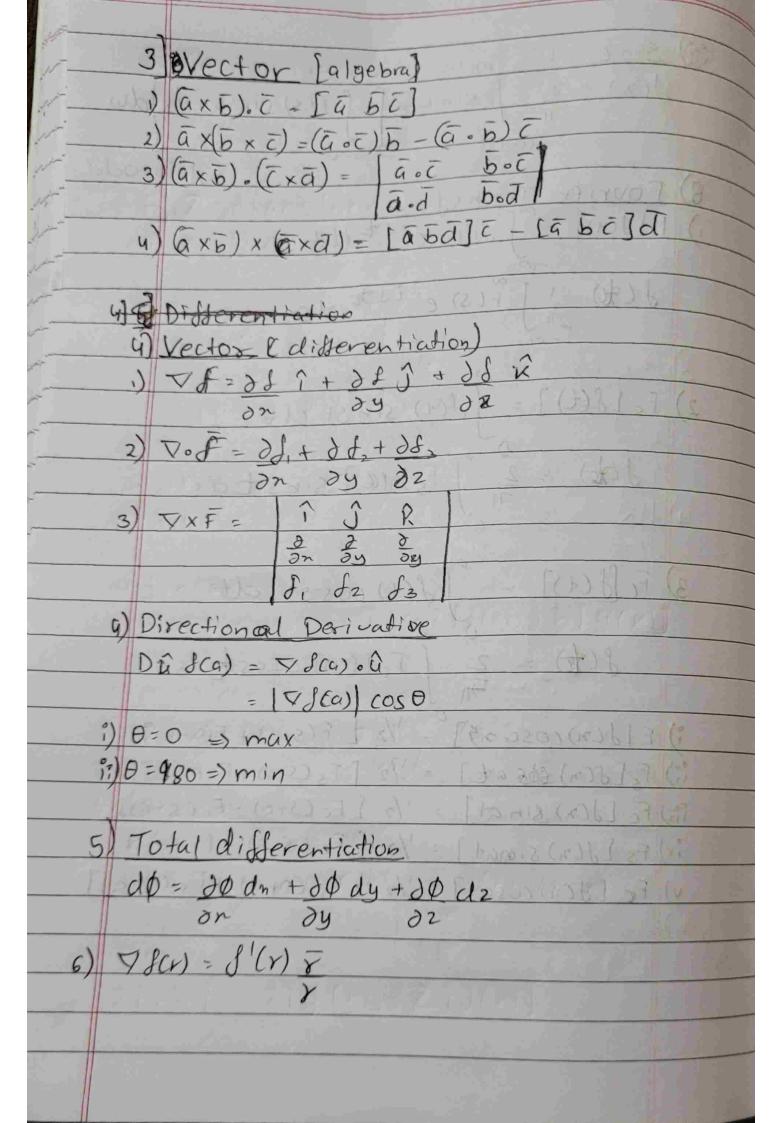
$$[g(x)] = e^{-\alpha S} \phi(s)$$
  
 $[g(x)] = e^{-\alpha S} \phi(s)$   
 $[g(x)] = g(x) = \int f(x-\alpha) (x+\alpha)$ 

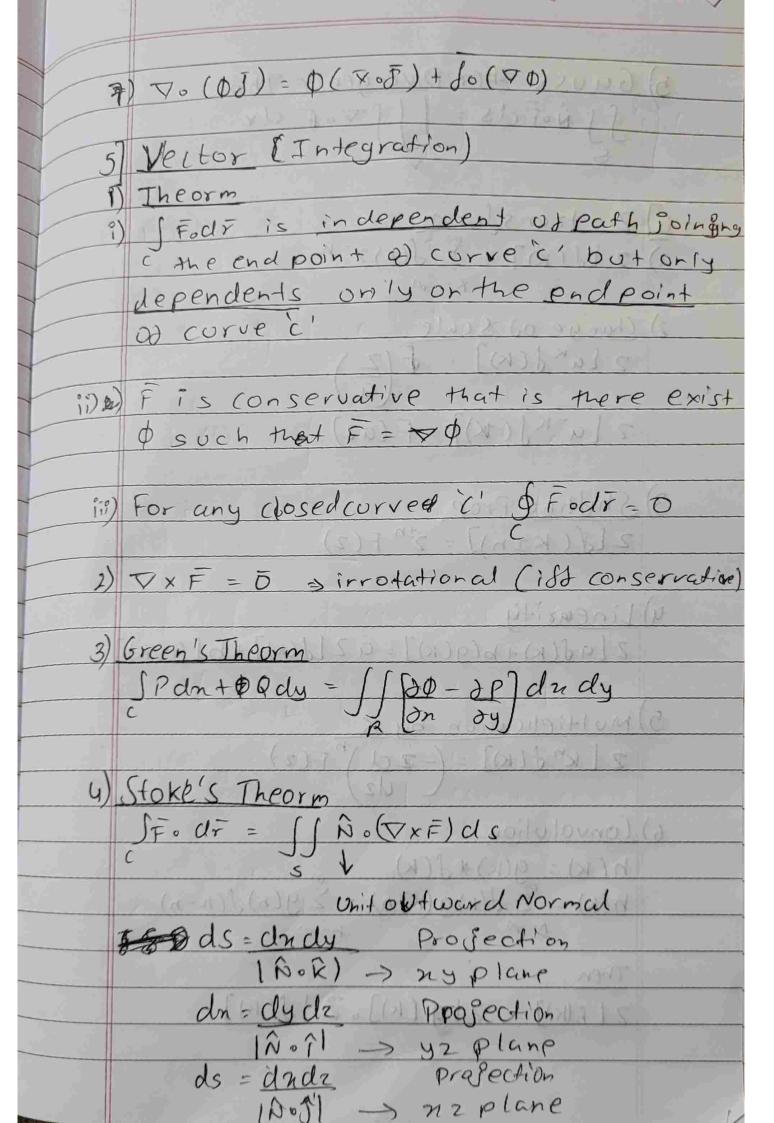


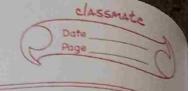








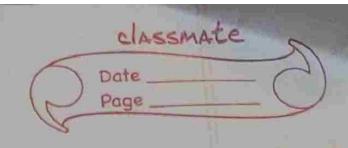




- 5) Gauss Ther Divergence Thm

  SinoFds = Signof dv
- 6] Z-transform i) 2[J(K)] = \$\frac{2}{5}J(K)2^{-K} K=-0
- 2) Change of Scale 2 [a × f(x)] = F(2) 2 [a - × f(x)] = F(a2)
- 3) Shifting Prop 2[f(K±n)] = 2<sup>th</sup> F(z)
- 4) Linearity Z[af(K)+b(g(K)]= a Z[f(K)]+b[g(K)]
- 5) Multiplication by K  $Z[K^nf(K)] = (-2d)^nF(2)$  dz)
- 6) Convolution  $h(\kappa) = g(\kappa) * J(\kappa)$   $h(\kappa) = \sum_{n=-\infty}^{\infty} J(n)g(\kappa-n) = \sum_{n=-\infty}^{\infty} g(n)J(\kappa-n)$

Then
2[h(k)] = 2[g(k)]. Z[f(k)]



Janverse 2-Transdorm
) 2"[F(2)] = JCK

2 Methods

2) Direct Division method

F(z) = P(z) Q(z)

3) Binomial Expancion Method
y) Partial Fraction Method