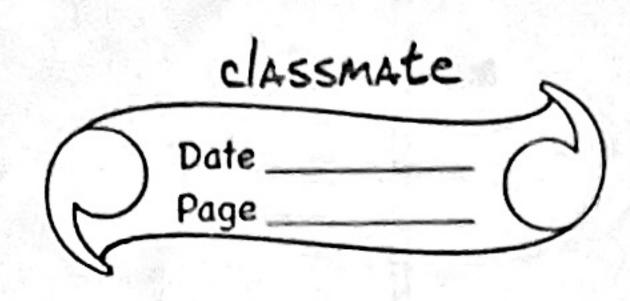
	CLAIRAUTS FORM
5	3h+1+2= px+qy+f(p,q) -1-6+ xh
	Replace p by a and q by b to get the complete
	solution.
	The complete solvis 2= ax + by + f(a,b)
	Singular solution
	consider the compléte soln
	dipperentiate it partially w.n.to a and b then equate
247+1	
	(h-2)2 4+ (x-2)4. w+ (2-4)x. x
	da
	$(x-\partial Z=0$
	K) Z 1+
J)	Solve $Z = px + qy + p^2q^2$
(e)	5 L Lb 1 xb = 36 1 4 Chi x xb 1 = 36
	complete solution is $z = ax + by + a^2b^2$
	大水・ス・ス・スート
	General solution put $b = \phi(a)$ in (1)
	$z = ax + \phi(a)y + a^2(\phi(a))^2 - 2$
	[-C) = 5 MIC! (-



dij	2	w.n.to	à'		() n	Lettern v		
- A	dz	= 0 =	x+	p'cazy	+ 0	2.2 p(a).	φ1(a)	7
	00		H	A P C	x* +	2. 2 φ(a). 2a. [φ(a)]	12-	3)

Fliminating a' using @ and @ will give the general solution.

Singular solution

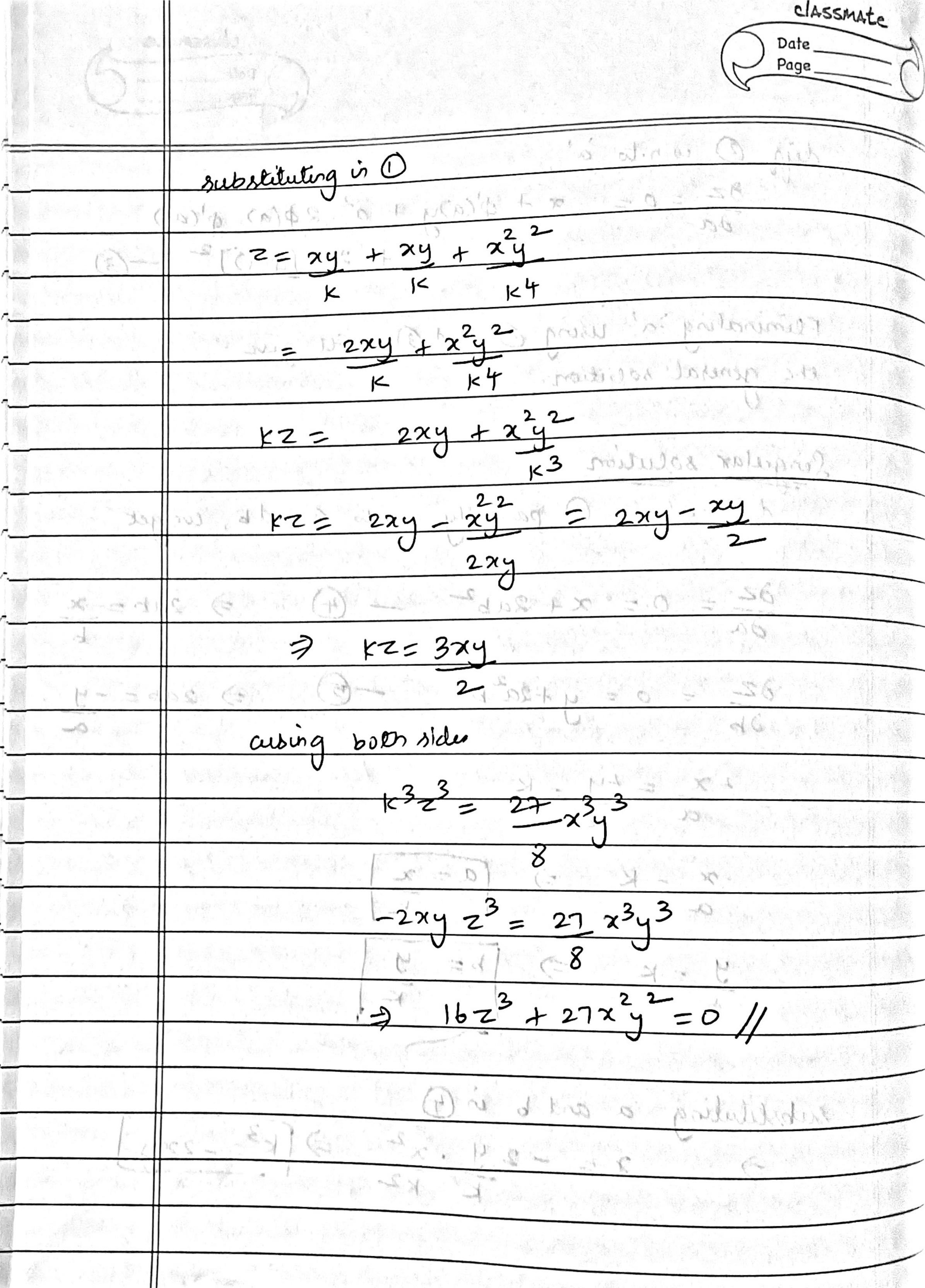
dejperentiale O partially wir to a and b, we get

$$\frac{\partial Z}{\partial a} = 0 = \chi + 2ab^2 - (4) \Rightarrow 2ab = -\chi$$

$$\frac{\partial Z}{\partial b} = 0 = y + 2a^2b$$
 - (5) =) $2ab = -y$

$$\frac{x = x}{a} = \frac{1}{x}$$

substituting a and b in (4) $\chi = -2 \cdot y \cdot x^2 \Rightarrow k^3 = -2x$



Service Control	
2)	Find the singular integral of the PDE 2= px+qy+p^2q^2 -> clairants'
	Z= px+qy+ p2-q2 -> clairants'
	form
702	The complete integral is
	$z = ax + by + a^2 - b^2 - 2$
4.	
	SINGULAR SOLUTION
	Depperentialé (1) parlially a and b, we get
	$0 = \chi + 2a \Rightarrow a = -2$
*	
	$0 = y + 2b \Rightarrow b = +y$
	substituting in O, we get
	9.
	$\frac{2 = -2 \cdot x + y \cdot y + (-2)^{2} - (+y)^{2}}{2}$
	$-\frac{x^2+y^2+x^2-y^2}{2}$
	$= -x^2 + y^2 + x^2 - y^2$ $= 2 + 2 + 2 + 4 + 4$
r!	$z - x^2 + 4^2$
	7
. 41	
	$47 = y^2 - x^2$ is the singular solution.