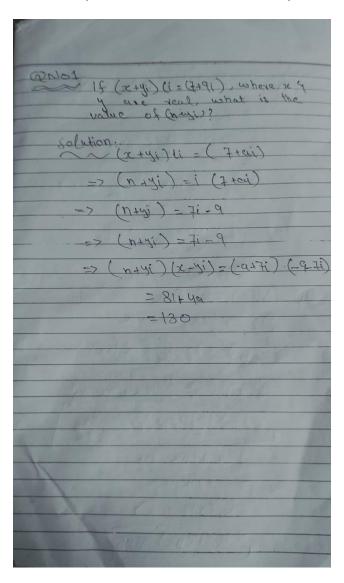
Date: 20 August 2020

ID 13033

Q.1.If (x + yi) / i = (7 + 9i), where x and y are real, what is the value of (x + yi)(x - yi)?



Q.2. Find the values of x and y in the following equation, given further that  $x \in R$ ,  $y \in R$ .

(x+iy)(2+i)=3-i

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Dalo 2 : ,	D
- find	the values of n 4 y in the
fullami	at equation given, fugue 1  SER. YER (xiig) (211)-3-1
trust	x 25 - 25 6 (xell) (211) 220
Calations	
	neiy) (Q+i)=3-i
9	n + in a dig + gi2 = 3-i
8	ln, in + 2iz y = 3+i
-	in 5 - 1( (n+2) + ( p-as
	1-4-3-sedi) , xxxy 1 ex(2)
21	1-9-1-1-1-1
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(1)15	-> 200-423
en (2)	-> 2×+231
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3	et.
- 34	
4.	4327
	7 put in eu(1)
3 -	7 723
eq(1) =>	21 723
	an= 317
	2n=10
	nc = 10/2
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	n=5 Ans
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Q.3. Solve the equation  $2z^2 - 2iz - 5 = 0$ ,  $z \in C$ .

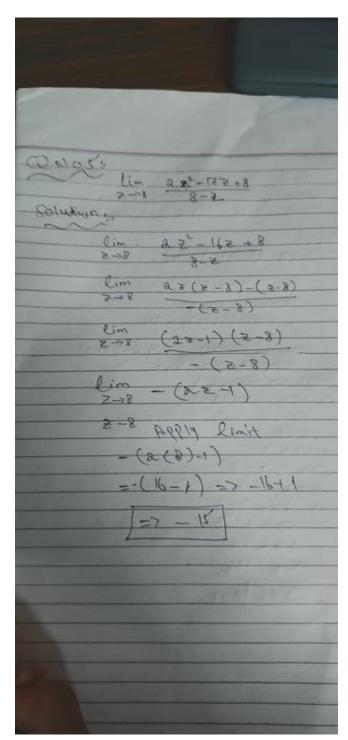
1 (2 NO 3: 2 2 - 2iz = 5=0
1 22-212-5-0
Calution: Using quotentic formula.
Com 2 (m)
Z = -b+]b2-uac
20
Cl=2, b=2i, (=-5
Putting values
2 21 1 1 1 2 1 2 1 (K)
Z= (-21) = /(-21)-1(1)
2(2)
= 2i + [4;2+40
4
= 2i + [1111]
= 21 = -440
4
=21 ± 536
700
4
= 21+6
= 21+6
=57 = 2(1+3), 2(1-3)
- Ye - Ye
1 2
$z=\frac{1}{2}$ , $z=\frac{1}{3}$ Ams
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Q.4. Express 4 -  $\sqrt{5}i$  in polar form.

QNO 4: Express 4-150 in Polan Sorm.
Solution.  y- Isi  polar form is 1 ciso.  we have to find 14 a.
$1 = \sqrt{a^2 + b^2}  a = 4$
= \langle (-\frac{1}{6})^2 + (-\frac{1}{6})^2 \qquad b=\frac{1}{6}
0 = -tan b/a 0 = 2n - tan 15/4
50 21 ton' 15 Soit cisa T21 cis 21 fan T52

$$\lim_{z o 8}rac{2z^2-17z+8}{8-z}$$

Q.5. Find the limit



## Differentiate

- (i).  $f(x)=(\ln x)^4$
- (ii).  $g(x)=x^2.\ln x$