PSIYNOMIAL EXTRA

$$\sum_{(i)} P(x) = \chi_3 - 3\chi_2 - 3\chi + 1$$

$$(i) \quad \chi + \beta + \gamma = -\beta = -(-3) = 3$$

$$(ii) \quad \chi + \beta + \gamma = -\beta = -(-3) = 3$$

(iii)
$$K_5 B \lambda + K B_2 \lambda + K B \lambda_5$$

$$\frac{(y)}{KB} + \frac{1}{BY} + \frac{1}{YK}$$

$$\frac{\gamma + K + B}{KBY} = \frac{3}{-1} = -3$$

$$\frac{(Vi)}{K} = \frac{1}{K} + \frac{1}{K} + \frac{1}{K} + \frac{1}{K} + \frac{1}{K} = -3$$

$$= \frac{3}{K} + \frac{1}{K} + \frac{1}{K} + \frac{1}{K} + \frac{1}{K} = -3$$

Find a cubic polynomial with the Sum, san Of the product of its zeroes taken two at a time and the product of its Berows as 2,-7,-14 respectively. K+B+y=2 KB+By+YK=-7 and KBY=-14 b(4) = N3-(K+B+A)N3+(KB+BA+AK)K = N3 - 2 N2 + (-7) N - (-14) = N3-2N2-TX+14 Ams 3 It - the Zerois of P(N) = N3-3N2+ N+1 are a-b, a, a+b. find a and b. P(N) = N3-3N2+ X+1 K= a-b. B= a, y= a+b .. K+B+y=-(-3) a-1-+ a + a + t = 3 <u> 3a - 3</u>

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$$(2-b) \alpha (2+b) = -\frac{1}{4}$$

$$(1-b) \times 1 \times (1+b) = -1$$

$$1-b^2 = -1$$

$$b^2 = \frac{1}{4}$$

P(N) = N2-PX+42 is 144. find p.

$$P(N) = N^{2} - PN + 45$$

 $(N-P)^{2} = P$
 $(N-P)^{2} = P$
 $(N-P)^{2} = P$

$$|AA + 180 = b_3 \qquad D=$$

$$|AA + 180 = b_3 - A \times A2$$

$$|AA + 180 = b_3 - A \times A2$$

5) A Sum of the square of Beroes of
P(N) = N2-8X+K is 40. find K.

 $K_5 + B_5 = 10$ $K_5 = \frac{1}{K} = 16$ $K_5 = \frac{1}{K} = 16$

 $(X+B)^2 = X^2+B^2+2KB$ $(Y+B)^2 = X^2+B^2+2KB$ $(Y+B)^2 = X^2+B^2+2KB$

[K=12]



(1) It the two Zerois of P(N) = N9-6N3-26N2

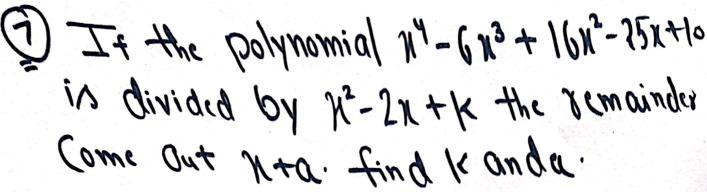
Circ 2+13 find Other Zerois.

John K= 2+ V3, B=2-V3 poly gui = N2- (x+B) x + xB

So
$$S(N) = N^2 - (2+13+2-13)N$$

 $+ (2+15)(2-15)$
 $= N^2 - 4N + 1$
 $= N^2 - 4N + 1$
 $= N^2 - 4N + 1$
 $= N^2 - 4N^2 + 138N - 35$
 $= N^2 - 4N^3 + 8N^2 - 2N$
 $= 2N^3 + 8N^2 + 2N$
 $= 2N^3 + 2N^3 + 2N$
 $= 2N^3 + 2N$
 $=$

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N3 4 AN + (8-14) X3-5x+K 1 MX-CN3+10N3-52N+10 - Ny - 5N3 + KN, 1 -AX3 + (10-K)N3-52N = KN3 + BN3 = AKN (8-1x)N + (AK-52)N +10 (8-1/4) + (-18+51/4 + +8/4-15 US= (5/K-8) N + /cz-8K+10

Remainder 11 + 0 9182 = 11 On Comparing 21x-9=1 $0=1x^2-81x+10$ 1x=5 $= 5^2-8x5+10$

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