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MATRIC NUMBER: 18/SCI01/010.

MAT 204 ASSIGNMENT.

A = 1 -3 6 B= 1 1 2 C= 0 4 3

 4 0 2 1 -2 1 6 -7 1

 8 5 1 0 3 -4 1 -3 2

1. RANK OF A:

| A| = 1( 0-10) -3(4-16) +6(20-0)

 =1(-10) -3(-12) +6(20)

 = -10+36+120

 = 146 ≠ 0

Hence, the rank of A is 3

1. RANK OF B TRANSPOSE : Transpose of B = 1 1 0

 |B| = 1( 8-3) -1( -4-6) +0(1+4) 1 -2 3

 =1(5) -1(-10) +0(5) 2 1 -4

 = 5+10+0

 =15 ≠ 0

Hence, the rank of B transpose is 3

1. RANK OF A+C TRANSPOSE:

(A+C )= 1 1 9

 10 -7 3

 9 2 3

 Transpose = 1 10 9

 1 -7 2

 9 3 3

|A+C|t = 1(-21-6) -10(3-18)+9(3+63)

 = 1(-27)-10(-15)+9(66)

 = -27+150+594

 = 717 ≠ 0

Hence , the rank of |A+C|t is 3

1. RANK OF (B+C):

(B+C) =

1 5 5

7 -9 2

1 0 -2

| B+C| = 1(18-0) -5(-14-2) +5(0+9)

 = 1(18) -5(-16) +5(9)

 = 18+80+45

 = 143 ≠ 0

Hence, the rank of |B+C| is 3

1. RANK 0F (A+B+C):

(A+B+C) = 2 2 11

 11 -9 4

 9 5 -1

|A+B+C| = 2 (9-20) -2(-11-36) +11(55+81)

 = 2(-11) -2(-47) +11(136)

 =-22+94+1496

 = 1568

Hence, the rank of (A+B+C) is 3