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19/MHS01/032

MEDICINE AND SURGERY

MAT 104 ASSIGNMENT

**A**

**SOLUTION**

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**=**

11-3x =

11-3x = Ax + 3A + Bx – B

11-3x = Ax +Bx +3A –B

11-3x = (A +B)x + (3A-B)

11 = 3A-B------equ. (1)

-3= A+B---------equ. (2)

From equ. 1; B= 3A-11, Substituting this into equ.2

-3= A+ (3A-11)

-3=A+3A-11

-3+11= 4A

8= 4A

A= 8/4 = 2

But B= 3A-11=3(2) -11 = -5

A=2; B=-5

Hence; = +

=2In(x-1) + (-5) In(x+3)

=2In(x-1) -5In(x+3)

 = 2In(x-1) -5In(x+3)

**B**

=

**=**

**=**

4x-16 =

4x-16 = Ax -3A + Bx + B

4x-16 = Ax+ Bx-3A+ B

4x-16 = x(A+B) – (3A+B)

4= A+B------equ. (1)

-16= -3A+B---------equ. (2)

From equ. 1; A=4-B, Substituting this into equ.2

-16= -3(4-B) + B

-16= -12+3B+B

-16+12= 4B

-4 = 4B

B= -1

But A= 4-B=4-(-1) = 5

 = +

= 5In(x+1) + (-1) In(x-3)

=5In(x+1) - 1In(x-3)

Hence; = 5In(x+1) - 1In(x-3)

**C**

)

 A+B+C

 AB+ C

 A B+ C

2= A+ B+ C-----(1)

-9= A + 4B - C----(2)

-35= -6A+3B-2C----(3)

From equ 1 A= 2-B-C; Substitute this into equ 2 &3

Substituting into equ 2;

-9= (2 – B - C) +4B – C----(4)

-9= 2 – B – C + 4B – C

-9= 2 – B + 4B – C – C

-9= 2+ 3B – 2C

-11=3B – 2C -----(4)

 Substituting into equ 3

-35= -6A + 3B – 2C

-35= -6(2 – B – C) +3B – 2C

-35= -12 + 6B + 6C + 3B – 2C

-35+12 = 9B + 4C

-23= 9B + 4C-----(5)

Solving equations 4&5 simultaneously;

-11= 3B – 2C-----(4)

-23= 9B+ 4C-------(5)

Multiply equ 4 by 2 and equ 5 by 1

2(-11= 3B – 2C) ------(6)

1(-23= 9B+ 4C) --------(7)

-22= 6B – 4C ----(6)

-23 = 9B + 4C-----(7)

Add equations 6 and 7

-45 = 15B

B= -45/15 = -3

But from equ 4

-11= 3B – 2C

-11 = 3(-3) – 2C

-11 = -9 – 2C

-2 = -2C

C= 1

But A =2 – B – C = 2 – (-3) – 1 = 2 +3+1 = 4

+ +

= 4In(x+1) – 3In (x – 2) + In(x+3)

= 4In(x+1) – 3In (x – 2) + In(x+3)