**Ex-)**

## 10x-5y+2z=3

## 4x-10y+3z=-3

## x+6y+10z=-3

Ans)

x=1/10[3+5y+2z]-----------------------------(1)

y=1/10[3-4x+3z]----------------------------(2)

z=1/10[-3-x-6y]-------------------------------(3)

First Approximation-

Put y=z=0 into---------------------(1),we get x=0.3

Put x=z=0 into---------------------(1),we get y=0.3

Put x=y=0 into---------------------(1),we get z=0.3

Second Approximation-

Put y=z=0.3 into---------------------(1),we get x=0.39

Put x=z=0.3 into---------------------(1),we get y=0.33

Put x=y=0.3 into---------------------(1),we get z=0.51

Third Approximation-

Put y=0.33 and z=0.51 into---------------------(1),we get x=0.363

Put x=0.39 and z=0.51 into---------------------(1),we get y=0.303

Put x==0.39 and y=0.33 into---------------------(1),we get z=-0.537

After eight approximation we get constant values of x , y and z up to three decimal places

x=0.341 , y=0.285 , z=-0.5033