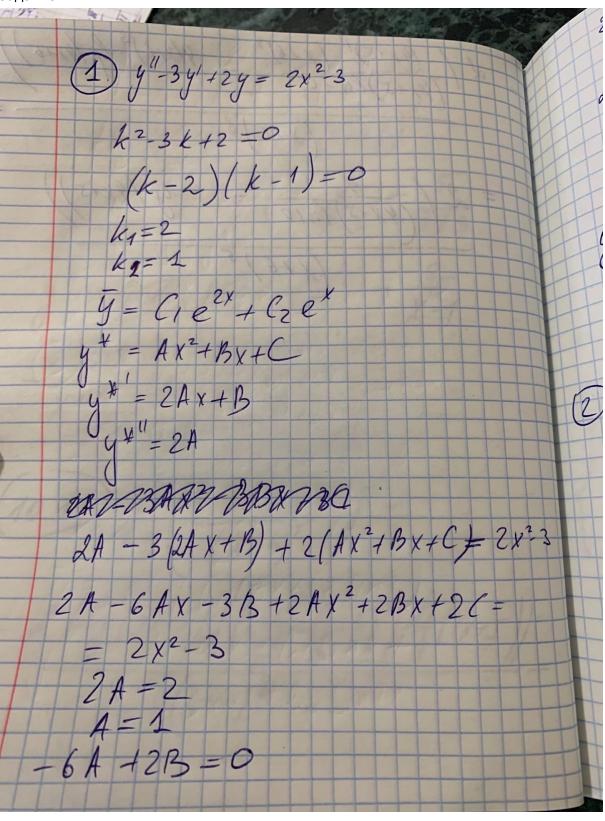
Задание 4



23 - 64 dA - 3B + 2C = -3 2-9+20=-3 $y^{\dagger} = 2x^2 + 3x + 2$ y= 9 + y* y = C1e2x + C2ex + x2+3x+2 2) y"-3y+2y=(2x+4)ex $-3Bx-6Ax-3B+2Ax^2+2Bx=2x+9$

J-2A=2 $\rightarrow JA=-1$ -B+2A=4 J-B-2=4 $y^{*} = \angle Rx \left(-x^{2} - 6x\right)e^{x}$ $y = \overline{y} + y^{*}$ 4= Ge2x + C2 ex + (-x2-6x)e $y'' - 2y' + 2y = 3\cos x - 5\sin x$ $k^2 - 2k + 2 = 0$ 2=(-2)2-4.2=4-8=-4 $k_{1,2} = 2 \pm 2i = 1 \pm i$ $\overline{y} = e^{x} \left(C_{1} \cos x + C_{2} \sin x \right)$ 1 = A1 COS X + B1811X + + A2 COS 2X + B2 SIN2X

 $y^{x'} = -A_1SINX + B_1CoSX - 2A_2SIN2X + 2B_2CoS2X$ $y^{x''} = -A_1CoSX - B_1SINX - 4A_2CoS2X - 4B_2SIN2X$ - A1 COSK - BISINX - 4 A2 COS 2x --4Bz Sin2x +2A1 Sinx -2B1 Cosx + +4A2 SM2x - 4 B2 Cos 2x + + 2A1 COSX + 2B181nx + 2A2 Cus 2x+ +2B2 SINZX = 3 COS X - 5 SINZX 1 A1 - 2 B1 = 3 B1 + 22 2A1 =0 -2A2 -4B2 =0 4A2 - 2B2 BARR = -5) A1 - 2B1 = 3 14A1 +2B1 = 0 541 = 3B1 = -2 A1 = -6 $A_1 = 3/5$ $A_2 + 2B_2 = 0$ > 5A2=-5 4A2 -2B2 = -5

B2= 3 COSX 6 gmx 8/ nzx - 6 SINX - COS 2X+ Sin 2x

Задание5

CARATINOS
了。 第一章
101/14 = 1
(D y"+y = 1
COSX
COST COST
1211
k +1=0
L2=-4
k4,2 = ± i
K1,2 = ±0
1 - Cosytczomi
y = C1 COS X + C2 Sinx
C/Cosx+C/8mx=0
110051120111
1-C1 8mx + C2 Cosx = 1
1-C1 Smx + C2 COSX = TOSX
LOST COST
0/= -C2 8mx
C/ = - C2 8mx
(08X
C. Smx. Sinx L Col cosx = 1
Cosx
COCK
THE POPULATION OF THE PARTY OF
(2 = 2
$dv = X+C_3$
62 = 1 - 1
Cer V
21 - (Sinx dy =
$C_1 = - $ $C_2 = - $
CJ - Jmi > CJ JCBX
1000
COSX

y = C1ex+C2xex 1 C1ex+C2xex=0 C/ex+C/xex+C/ex= ex =) / C/ + C/ x = 0 C1+61X+C2=1

= arcfe x+C3 1 lm/1+x2/+C4 = (arofe x+G)ex