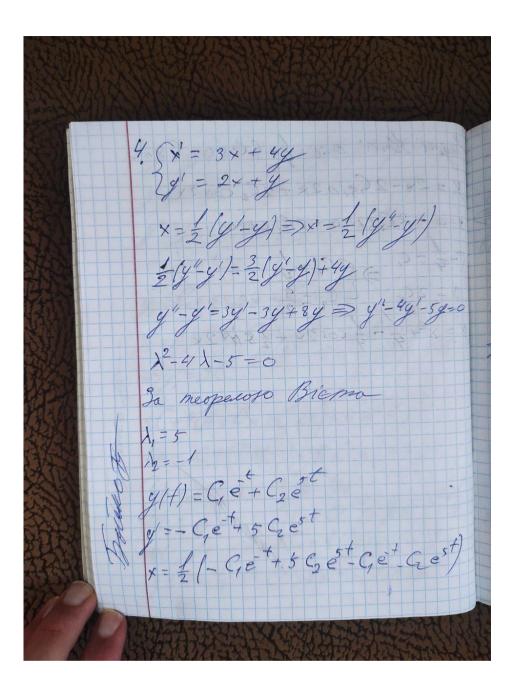
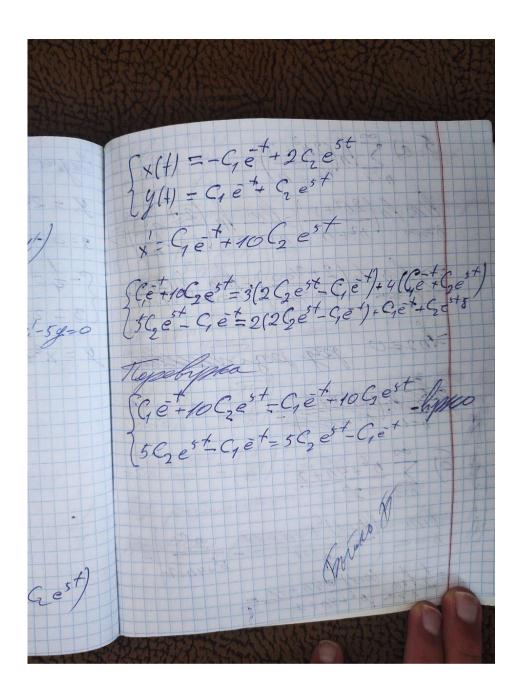
1. xy2 = 2 + log2 x x y 2 dy = 2 + log x = y 2 dy = 1/2 + log x h Jegg = J(2 + log, x)dx => => 1/3 = 2 lnx + 2 ln2+C Slogs x dx = [t - logx] = -lng. flot = 2 ln2+C y3 = 2 lnx + lol x - ln2 + C Trouse of

2. y'-4xy=x y(0)=0,75 $y'=x(4y+1) \Rightarrow \frac{3y}{4x}=x(4y+1)$ 12+1/2×1dx = 15d(4y+1)= fxdx 1/n (4y+1)= x2+C,=>y-Ce2-7 Bogoro Houi 0, 75 = Ce°- 1 3 + 4 = C C = 1 = 9 = e = 4 $y' = 4 \times e^{2 \times 2}$ $4 \times e^{2 \times 2} = 4 \times (e^{2 \times 2} + 4) = x > x = x - here$

3 $y'' + 4y = 4 \times^{2} + 3$ y(0) = 0 y(0) = 3 $y' + 4y = 0 \Rightarrow \lambda^{2} + 4 = 0 \Rightarrow \lambda^{2} = -4 \Rightarrow$ $\Rightarrow \lambda = \pm 2i$ y, - Geos 2x + Gsinx 1/2 = A+Bx + Co2 > y2 = B+2Cx =>

Bagon Hour 0=0+ 4+ 9 (050+ 85),0 y, = 2x - 2 Gg/n2x + 2 C2 C052x 9=0-2C, Sino+2C, coso $\begin{cases} -\frac{1}{4} = C, \\ 3 = 2C_2 \end{cases} = \begin{cases} C_1 = \frac{1}{4} \\ C_2 = \frac{3}{2} \end{cases}$ y=x2+4-4 cos2x+3542x





 $5. a) \sum_{n=1}^{\infty} l_n \left(\frac{2h^2+3}{h^2+h}\right)$ lim ln (2h2+3)-lim ln (2+32) 239 1 ln (2+3/00) - lin ln(2+0) -

 $\frac{1}{2} \frac{1}{n^{2}} = \frac{1}{2} \frac{1}{n^{2}} = \frac{1}{n^{2}}$ Min (sin 4n+1) - 1-20 /m (sin 4n+1) = = fim \(\sin \frac{\pi \dagger}{4 + \frac{1}{\pi}} \) = fim \(\sin \frac{\pi}{4 + \frac{1}{\pi}} \) = \(\frac{1}{\pi} \) = \(\frac{1}{\pi} \) = \(\frac{1}{\pi} \) = \(2 > 1 \)

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