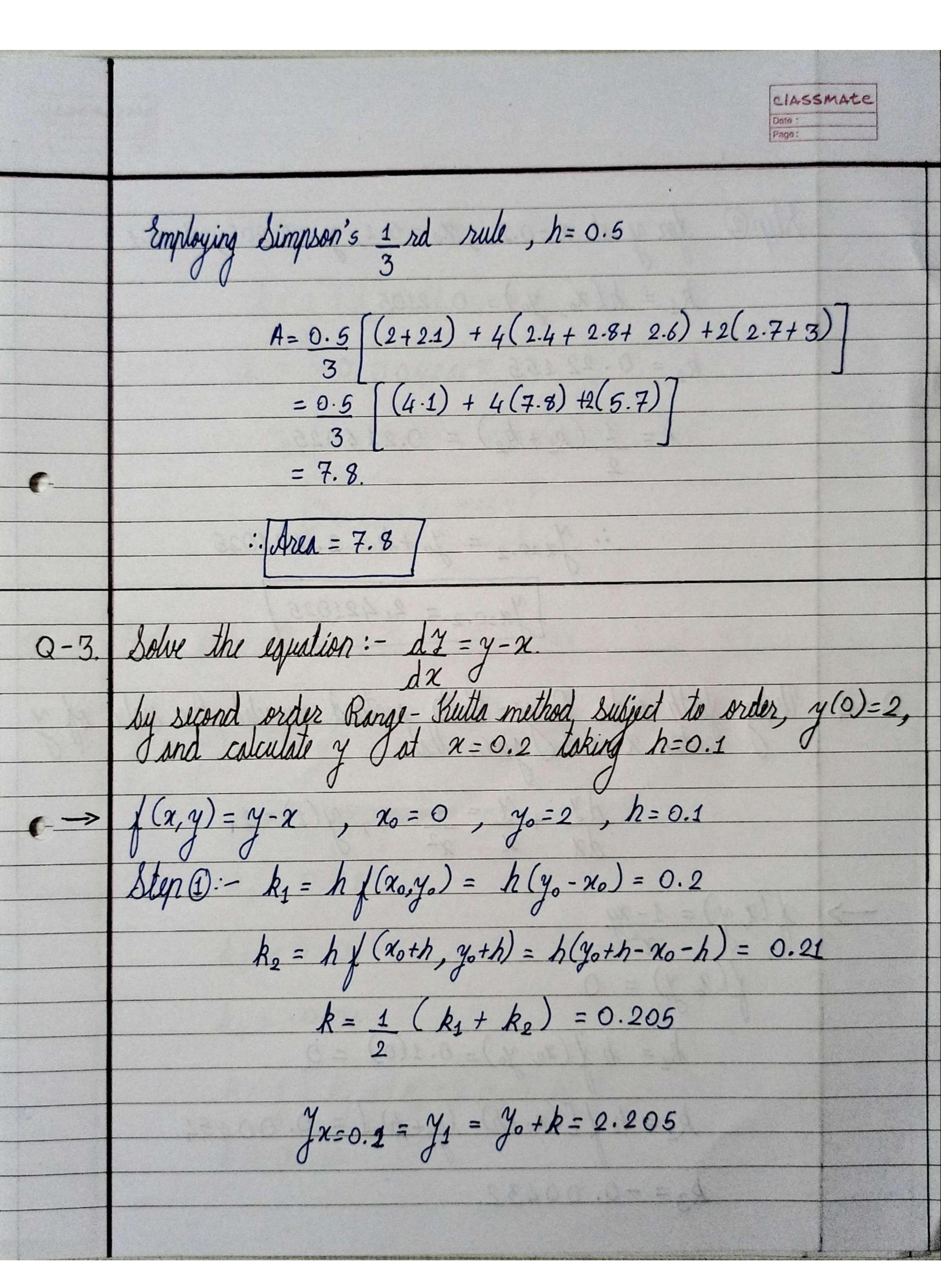
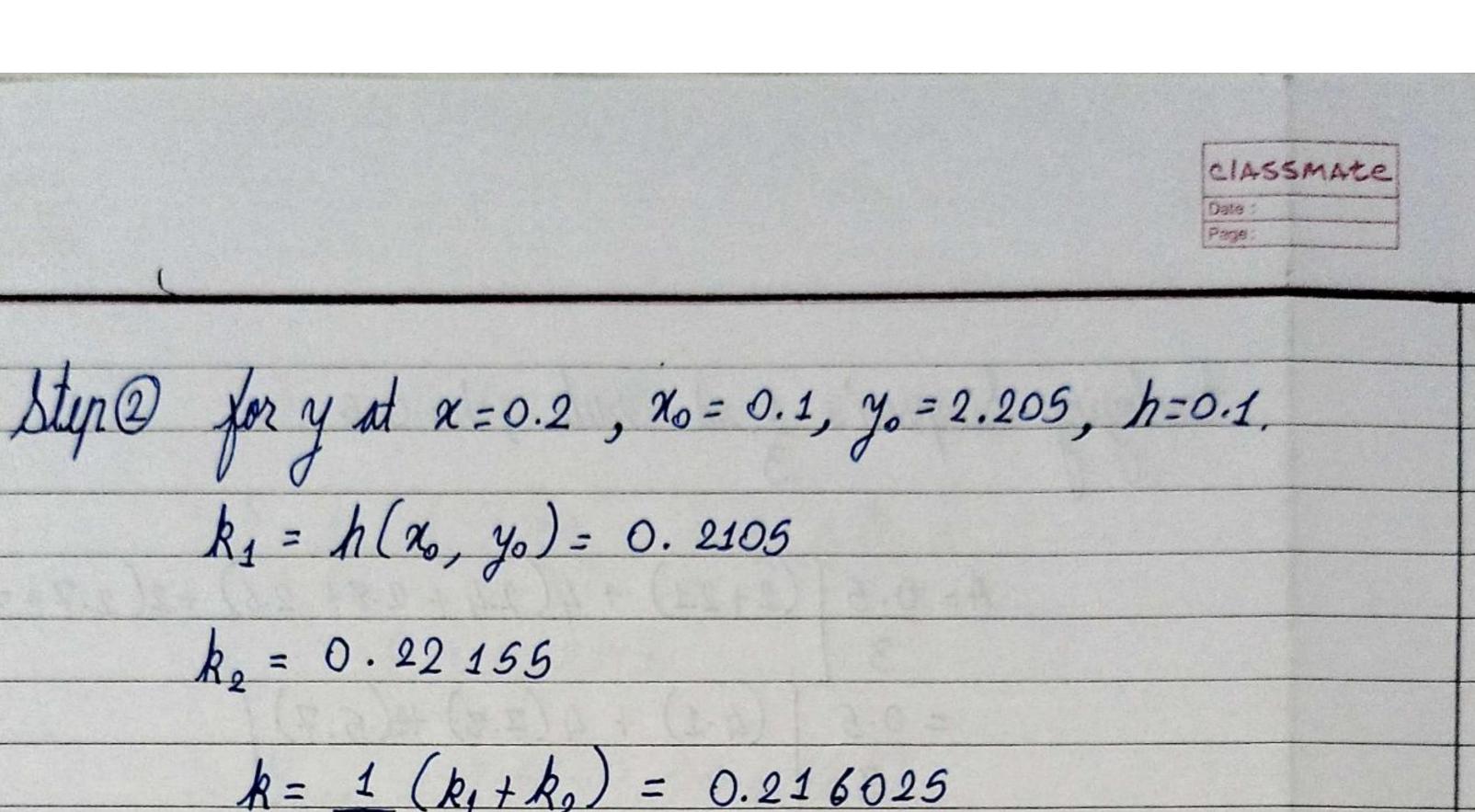
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	3	100		150-75=79								
	4	250	250-100=19									
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	CIASSMAte Date: Page:						
	$h=1$ , $x=0.5$ , $x_0=0$ , $y_0=1$ . $l=x-x_0=0.5-0=0.5$ .						
	y = 4.1796						
	i. At x=0.5, y is 4.1736						
Q-2.	A curve is drawn to pass through the points given by the following table.    X   1   1.5   2   2.5   3   3.5   4     4   2   2.4   2.7   2.8   3   2.6   2.1						
	Estimate the area bounded by the curve the x-axis and ordinates of $x=1$ and $x=4$ .						
->	Area A is given by A = "Iy.da						





$$k_2 = 0.22155$$

$$k = \frac{1}{2}(k_1 + k_2) = 0.216025$$

k1 = h(x6, y6) = 0. 2105

$$\frac{dy}{dx} + \frac{y}{x} = \frac{1}{x^2}, \quad y(1) = 1.$$

$$\frac{1}{2} \left( x, y \right) = \frac{1 - xy}{x^2}$$

$$\int \left( x, y \right) = \frac{1 - xy}{x^2}$$

$$\int \left( x, y \right) = 0.$$

$$k_1 = h \dot{\chi}(\chi_0, \chi_0) = 0.1(0) = 0$$

$$k_2 = h \int [(x_0 + h) (y_0 + h)] = 0.00454.$$

$$k_3 = -0.00432.$$

	CIASSMAte Date: Page:
	k4 = -0.00788
	$R = \frac{1}{6} [k_1 + 2k_2 + 2k_3 + k_4]$ $k = -0.0042667$
	$\therefore y_{x=1.1} = 1 + (-0.0042667)$ $y_{x=1.1} = 0.9957$
0-6	Forth order Range-Stutta method, dy = x2+ y2, y(0)=0, Estimate
~ >	
-	$k_1 = f(\alpha_0, y_0) = 0.$
	$R_2 = 0.01$ $R_3 = 0.01$
	$k_4 = 0.04$ $k_4 = \frac{1}{2} \left[ k_1 + 2k_2 + 2k_3 + k_4 \right]$
	k = 0.015

CIASS Date: Page.	mate
$y_{x=0.2} = 0 + k = 0.016$ Second iteration $y_{x=0.2} = 0.00067$	
$R_{4} = 0.160428$ $R = 0.09346$ $\therefore y_{x=0.4} = 0.021360224.$	