

Bitrus Nathan Kura  
161ENG011004  
Chemical Engineering

1.  $X_f(i) = 6 \text{ cm}$   
 $C = 2.2 \text{ cm}^2/\text{hr}$   
 $t_f = 0.3$   
 $m = 20$   
 $n = 15$   
 $d_{sc} = 0.3$   
 $d_t = 0.02$   
 $r = 0.488889$

$\alpha =$	0	1	2	3	4	5	6	7	8	9
$t =$		0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7
0 0	0	0.27	1.08	2.43	4.32	6.75	9.72	13.33	17.28	21.87
1 0.02	0	0.534	1.344	2.694	4.584	7.014	9.984	13.494	17.544	22.134
2 0.04	0	0.668933	1.608	2.958	4.848	7.278	10.248	13.758	17.808	22.398

9	10	11	12	13	14	15	16	17
2.7	3	3.3	3.6	3.9	4.2	4.5	4.8	5.1
21.87	27	32.67	38.88	45.63	52.92	60.75	69.12	78.0
22.134	27.264	32.934	39.144	45.894	53.184	61.04	69.384	78.2
22.398	27.528	33.198	39.408	46.158	53.448	61.278	69.648	78.5

18	19	20
5.4	5.7	6
87.48	97.47	108
87.744	97.734	108
88.008	97.86893	108