Week 3:

Travis Williams 2 months ago

Actions

I think the key to finding the correct answer to this one is that f(9) = 1/6. Converted to decimal, that is 0.16666... So, your output for q1 and q2 should be close to that.

Question 4 says to follow the same process and answer the same questions as question 3 and, while you can use the code in the book, you just need to adjust for $f(x) = \sqrt{x}$ in the equations for $Q1$ and $Q2$. This is what I did:

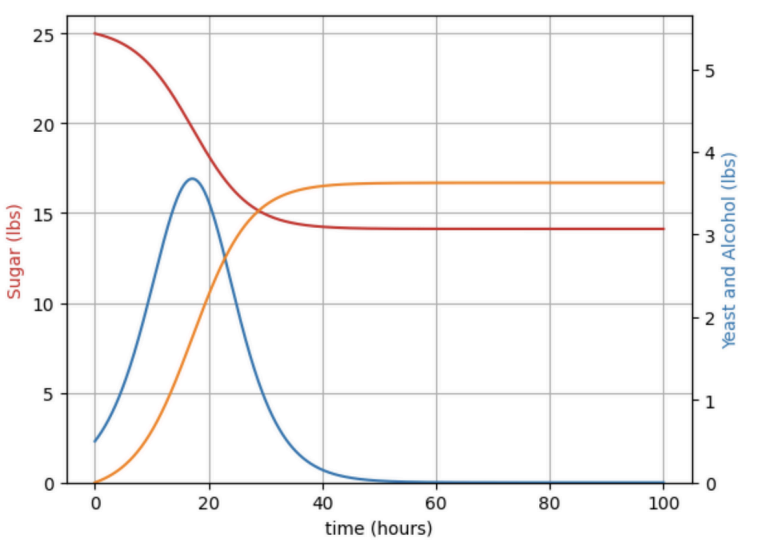
```
import matplotlib.pyplot as plt
import numpy as np
a = 9
h_list = []
q1_list = []
q2_list = []
for k in range(0, 9):
    h = 1 / 2 ** k
    q1 = (np.sqrt((a + h)) - np.sqrt((a - h))) / (2 * h)
    q2 = (np.sqrt((a + h)) - np.sqrt(a)) / h

    print(h, q1, q2)
    h_list.append(h)
    q1_list.append(q1)
    q2_list.append(q2)

plt.plot(h_list, q1_list, marker = "o")
plt.plot(h_list, q2_list, marker = "o")
plt.grid(True)
```

Week 5:

Travis Williams 1 month ago

Actions

This was helpful, thanks! I have corrected my equation for yeast, and am getting similar results as what is pictured below. I decided to utilize two y axes for my program though in order to more accurately represent the amount of yeast and alcohol since the scale is quite different than that of sugar. Here is my resulting graph:



helpful! | 0

Anonymous Calc 1 month ago

I like the idea to have the two different y axis on both sides of the graph. It's helpful seeing this graph alongside a graph that has them sharing an axis, once again reminding me that axis perception maters.