Name: _____
MATH 108
Fall 2023
HW 3: Due 09/19

"Money is not the most important thing in the world. Love is. Fortunately, I love money."
– Jackie Mason

Problem 1. (10pt) The CPI in 2022 was approximately 296.071. According to the US Bureau of Labor Statistics, the current CPI is 307.026.

  (a) Find the inflation rate from 2022 to 2023.

  (b) If the inflation rate in (a) continues from 2023 to 2024, estimate the cost of a good next year that costs $46.99 this year,

  (c) If the inflation rate in (a) remains constant each year, what will the increase in prices be from 2023 to 2028?

Problem 2. (10pt) Stevie runs a shop that sells hot teas and baked beans. The shop is, surprisingly, not doing well. She decides to take out a simple discount note to pay for some additional advertising in the hopes that it will drive customers to the store. The note the bank offers is $8,000 for 7 months at 8.3% annual interest.

(a) What is the maturity for this simple discount note?

(b) What is the discount for this note?

(c) What is the interest Stevie pays on this loan?

(d) How much does Stevie receive from the bank?

(e) At the end of the 7 months, how much does Stevie owe the bank?