

Math 123
Spring 2023
Dr. Lily Yen

Assignment 4

Show all your work

Name: _____
Number: _____
Signature: _____
Score: ____/21

Problem 1: Answer the questions. Write out steps for each. One mark per part except two marks for the last part.

a. Convert the fraction *three and nine tenths* into a percent.

b. Find 0.8 % of 278.

c. Brian wants to share 6 mini-snack bars out of a box of 120 with his brothers. What percentage of his box of mini-snack bars does he want to share?

d. If Janette finds in her drawer 34 % of her pens are Muji pens, and she counts 17 Muji pens in total, how many pens does she have in her drawer?

e. David's family attended *Love and Fate*, a concert by the Vancouver Brass Orchestra last fall. For the family dinner before the concert, David's grandmother paid \$279 including taxes and an 18 % tip. What was bill before taxes and tip? Assume a 12 % service tax.

Score: /6

Problem 2: Solve for the indicated variable in each of the following.

a. Solve for I in $m = \frac{P+I}{n}$

b. Solve for x in $(1.24)^x = 10$. Provide accuracy to two decimal places.

c. Solve for r in $A = P(1 + r)^7$

Score: /5

Problem 3: Janette's grandmother is offered by her bank three options for a \$6000 guaranteed investment certificate (GIC):

- a. 4.5% compounded monthly;
- b. 4.55% compounded annually; or
- c. 4.33% compounded weekly. (Use 52 weeks per year.)

Compute the interest after one year in each case and decide which option earns Janette's grandmother the most.

Score: /5

Problem 4: Brian's cousin purchased a sailboat and financed \$8500 at \$650 per month for 18 months. Assuming the add-on interest method, what was the amount of interest paid over 18 months? Find the annual interest rate charged on the loan.

Score: /3

Problem 5: If *Chancellor's Choice Financial* master card charges 22% on unpaid balance, how much would it cost in finance charge to leave \$757 unpaid past the due date for 30 days? Hint: Credit card companies use 365 days a year. For the sake of simplicity, use simple interest.

Score: /2