Math 123-01
Fall 2025
Dr. Lily Yen

Assignment 4

Show all your work

Name: _____
Number: _____
Signature: _____
Score: ___/10

Problem 1: Answer each question to two decimal place accuracy when appropriate. Write out steps for each.

a. Find 215 % of 60.

$2.15 \times 60 = 129$

129

b. Convert the fraction *seventeen eighths* into a percent.

$\frac{17}{8} = 2.125 = 212.5\,\%$

212.5 %

c. What fraction of 250 is 380? Simplify to lowest terms.

$\frac{380}{250} = \frac{38}{25}$

38/25

d. 18 is 2 % of what number?

If $0.02x = 18$, then $x = \frac{18}{0.02} = 900$

900

e. When you pay a 55-dollar monthly cellphone/data package, how much in taxes do you need to pay? Hint: We have a 5 % GST and 7 % PST.

12 % of \$55 is $0.12 \times \$55 = \$6.60$,

\$6.60

Score: /5

Problem 2: Janette wants to save for a new pair of winter boots ticketed in a store for \$200. What is the least amount of money she needs to bring to the store to pay for the boots?

The sales tax is 12 %, so she needs at least $1.12 \times \$200 = \$224$.

Score: /1

Problem 3: Brian's grandmother invests \$70 000 at a rate of 3.45 % compounded biweekly. How much would she have in 10 years?

A year has 52 weeks, so 26 interest periods. So she'll have $70\,000(1 + \frac{0.0345}{26})^{260} \approx 98\,816.69$.

Score: /2

Problem 4: David needs to decide which of the following two investment options is better: an annual interest rate of 3.35 % compounded monthly or an annual interest rate of 3.2 % compounded daily. Show all calculation which leads to your conclusion.

With the first investment, after one year you would have multiplied the principal by $\left(1 + \frac{0.0335}{12}\right)^{12} \approx 1.034\,019$, so the effective rate is 3.4019 %.
With the second investment, you get $\left(1 + \frac{0.032}{365}\right)^{365} \approx 1.032\,516$, so the effective rate is 3.2516 %.
Therefore the first option is better.

Score: /2