Math 123-01
Fall 2025
Dr. Lily Yen

Quiz 4

Show all your work

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

Problem 1: Answer the questions. Write out steps for each; provide a two-decimal place accuracy when appropriate. One mark per part except two marks for the last part.

a. Convert the fraction *twenty-five eighths* into a percent.

$\frac{25}{8} = 3.125 = 312.5\,\%$

$\boxed{312.5\,\%}$

b. Find 13 % of 500.

$0.13 \times 500 = 65$

$\boxed{65}$

c. Janette wants to buy 5 bags of Halloween candy priced at $10 each. With BC's 12 % combined tax on candy, how much does Janette need to pay in total?

The price is $10 \times \$5 = \$50$, so she needs to pay $1.12 \times \$50 = \$56$.

$\boxed{\$56.00}$

d. Out of Brian's collection of books, 20 % is comics. If Brian has 52 comic books, how many of his books are NOT comics?

If the total number of books is x, then $0.20x = 52$, so $x = \frac{53}{0.20} = 260$. Therefore $260 - 52 = 208$ are not comics.

$\boxed{208}$

e. David treated his mother to a Mother's Day Brunch at Queen Elizabeth's Theatre's Browns Social House. He saved $100 for this occasion to cover a 15 % tip and a 12 % service tax. What was the maximum they could order to stay within his budget of $100?

Say the cost before tip and taxes is $\$x$. Then the tip is $0.15x$, and the tax is $0.12x$, so he has to pay $x + 0.15x + 0.12x = 1.27x$.
If $1.27x = \$100$, then $x = \frac{100}{1.27} = \$78.74$.

$\boxed{\$222.27}$

Score: /5

Problem 2: Brian's grandmother is offered by her bank three options for a $10 000 guaranteed investment certificate (GIC):

a. 3.5 % compounded weekly.

b. 3.65 % compounded semi-annually; or

c. 3.59 % compounded monthly.

Compute the interest after one year in each case and decide which option earns Janette's grandmother the most. (Use 52 weeks per year.)

a. $\$10\,000\left(1 + \frac{0.035}{52}\right)^{52} = \$10\,356.08$, so the interest is $356.08.

b. $\$10\,000\left(1 + \frac{0.0365}{2}\right)^{2} = \$10\,368.33$, so the interest is $368.33.

c. $\$10\,000\left(1 + \frac{0.0359}{12}\right)^{12} = \$10\,364.97$, so the interest is $364.97.

Hence the 3.65 % compounded monthly (option b) is best.

Score: /5