Math 123-02
Spring 2026
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 *three and one fifth* into a percent.

$3\frac{1}{5} = 3.2 = 320\%$

$\boxed{320.0\,\%}$

b. Find 6% of 80.

$0.06 \times 80 = 4.8$

$\boxed{4.8}$

c. Katharina wants to donate 36 stuffed animals out of a collection of 180. What percentage of her stuffed animals is left for herself?

$\frac{36}{180} = \frac{1}{5} = 0.2020\%$, so what's left is $100\% - 20\% = 80\%$.

$\boxed{80\,\%}$

d. Janette bought a pair of snowshoes for $99.86, including tax. Suppose BC has a 12% combined taxes, find the ticket price of Janette's pair of snowshoes before taxes.

Say the price before taxes is x. Then $1.12x = 99.86$, so $x = \frac{99.86}{1.12} = 89.16$

$\boxed{\$89.16}$

Score: ___/4

Problem 2: Brian's family plans to attend *La Bohème* this spring at the QE theatre. For the family dessert after the opera, Brian's grandmother budgets $200, to include dessert cost, taxes, and a 15% tip. What is she going to pay for taxes and tip from the $200 budgeted amount? Assume a 12% service tax.

Since there is no sales tax on tips, if the cost of the food is x, then the total cost is $x + 0.12x + 0.15x = 1.27x$. Therefore $1.27x = \$200$, so $x = \frac{\$200}{1.27} = \$157.48$. The taxes and tip then are $\$400 - x = \$200 - \$157.48 = \$42.52$.

Score: ___/3

Problem 3: David's friend, Tom, purchased a yacht and financed $50\,000$ at $2200 per month for 30 months. Assuming the add-on interest method, what was the amount of interest paid over 30 months? Find the annual interest rate charged on the loan.

Tom paid a total of $30 \times \$2200 = \$66\,000$. Since Tom borrowed $\$50\,000$, the total interest paid was $\$16\,000$.
To find the annual interest rate, $16\,000 \div 50\,000 \div 2.5 = 0.128 = 12.8\%$.

Score: ___/3