

# Financial Mathematics Test

Use the exchange rates from the following chart.

Canadian Dollar		
	C\$1	in C\$
U.S. dollar	0.991051	1.00903
euro	0.727323	1.37490

For #1 to #7, select the best answer.

- Which of the following has the lowest unit price?
  - 25 mL for \$0.58
  - 50 mL for \$1.08
  - 1750 mL for \$40.00
  - 1 L for \$35.00
- You have 50 euros. What is the closest equivalent in Canadian dollars?
  - \$36.30
  - \$68.00
  - \$68.95
  - \$69.80
- Which statement is correct?
  - Gross pay = hourly wage  $\times$  1.5
  - Gross pay = hourly wage  $\times$  hours worked
  - Gross pay = net pay – deductions
  - Gross pay = net pay + vacation pay
- Which of the following earns the highest monthly gross pay?
  - 10% commission on sales of \$24 995
  - 160 h worked at \$21.50/h
  - 160 h worked at \$14.00/h, plus 5 h at time-and-a-half
  - \$25 000 annual salary
- What payment method gives the most consistent amount over time?
  - commission plus base pay
  - hourly wage plus overtime
  - annual salary plus benefits
  - hourly wage plus tips
- Anne-Marie earns \$8.50/h, plus time-and-a-half for overtime hours over 40 h/week. She works 48 h this week. What is her gross weekly pay?
  - \$442.00
  - \$601.56
  - \$651.50
  - \$876.56
- Andrew, a journeyman carpenter, has just taken over as manager of a construction company. His first pay stub for the month gives the following information:
  - gross pay: \$7807.20
  - total income tax: \$1473.60
  - CPP deduction: \$239.73
  - EI deduction: \$58.51
  - health insurance: \$225.80
 What is his net pay?
  - \$2704.73
  - \$5622.71
  - \$5809.56
  - \$7807.20



- 8.** Max sees that 450 g of ground beef is on sale for \$1.98 at the BCD Store. Ground beef is regularly priced at \$3.99 per kilogram at the EFG Market.
- What is the unit price of each? Which is cheaper?
  - The BCD Store raises the price of ground beef to \$2.49 for 450 grams. What is the percent increase to the nearest whole percent?
  - What else should Max consider before he decides which size to buy?
- 9.** While shopping in Maine, Dick bought golf clubs for US\$1499.00 and shoes for US\$49.00. He needs to declare his purchases at the border.
- How much did he spend in U.S. dollars?
  - What is the equivalent in Canadian dollars? Round your answer to the nearest dollar.
- 10.** Jack works in a warehouse. He is paid \$9.50/h. He is paid time-and-a-half if he works more than 40 hours in 1 week. Jack worked 45 hours this week. What is his gross pay?
- 11.** Emily's weekly gross pay is \$965.90. Her weekly deductions are \$205.45.
- What is her net weekly pay?
  - What is her net monthly pay? Assume a 4-week month.

- 12.** Eric sold \$15 550 worth of merchandise this week. He receives a commission of 8% on his sales. What is his gross weekly pay for this week?

*Use the following values for #13 and #14.*

- federal income tax = 15% for the first \$43 561 of taxable income + 22% of additional income up to \$87 123
- provincial income tax = 8.79% for the first \$29 590 of taxable income + 14.95% for the next \$29 590
- CPP = 4.95% of gross income minus \$3500, to a maximum of \$2356.20
- EI = 1.88% of gross income, to a maximum of \$891.12

- 13.** Use the following pay stub to answer the questions below. This is the pay for one week in January.

Earnings	Rate	Hours	Current
Regular	\$18.00	40	
Overtime	\$27.00	16	
<b>Gross Pay</b>			<b>A</b>
<b>Deductions</b>			
Income Tax			<b>D</b>
CPP			<b>B</b>
EI			<b>C</b>
Union Dues			\$65.00
<b>Total Deductions</b>			<b>E</b>
<b>Net Pay</b>			<b>F</b>

- Calculate the gross pay **A**.
- Calculate the CPP and EI deductions **B** and **C**.
- Calculate the income tax deduction **D**.
- Calculate the net pay **F**.



- 14.** A backhoe operator made \$54 900 last year.
- What did he pay in CPP and EI?
  - What is his income tax bill for the year?
  - The backhoe operator is not unionized but did donate \$200 to charity through his work. This should be on his T4 but will not affect what he pays in income tax through his work. Make up his T4.

<b>Income</b>	
Oct 15 pay	\$455.36
Oct 30 pay	\$590.09
<b>Expenses</b>	
Car costs	\$250.00
Gym	\$60.00
Spending money	\$150.00
Clothes	\$95.00
Cell phone	\$80.00

- 15.** A salesperson sells an average of \$200 000 worth of equipment per month. Which would pay the most in a year: 2% commission, or \$45 000 annual salary? Why might a salesperson prefer salary over commission?

- 16.** Bob is making a monthly budget to save for college.

- What is Bob's total income?
- What are his total expenses?
- How much can Bob save for his college fund each month?
- Suppose Bob decides to save even more money. What could Bob do to increase his savings? Explain your thinking. Revise his budget accordingly. List one pro and one con of your strategy.

- 17.** Yee is considering whether to buy a car so that he can get a job while he attends college. What factors should he consider in his decision? Describe a process Yee could use to decide if buying a car is the best option.

