

WORKSHEET – Earning and Spending Money Review

1. Emily earns a gross annual salary of \$28 500. If she is paid bi-weekly, calculate her gross bi-weekly pay.

$$\text{Gross bi-weekly pay} = \$28500 \div 26 = \$1096.15$$

2. Charlie earns \$15.50/h plus 7% commission on his sales. If he worked 38 hours last week and his sales totaled \$1922, what would his gross pay be for the week?

$$\text{Regular pay} = \$15.50 \times 38 = \$589.00$$

$$\text{Commission} = 0.07 \times \$1922 = \$134.54$$

$$\text{Total pay} = \$723.54$$

3. Marley earns minimum wage (\$10.25/h) working at a clothing store. A regular work week is 40 h. She gets paid time-and-a-half for any overtime hours. Last week she worked 54 hours. Calculate her gross pay for the week.

$$\text{Regular pay} = \$10.25 \times 40 = \$410.00$$

$$\text{Overtime pay} = 14 \times \$10.25 \times 1.5 = \$215.25$$

$$\text{Total pay} = \$625.25$$

4. For someone with a taxable income of \$42 200, determine the amount of New Brunswick provincial income tax payable using the following chart.

	Taxable income is \$38 190 or less	Taxable income is more than \$38 190, but not more than \$76 380	Taxable income is more than \$76 380, but not more than \$124 178	Taxable income is more than \$124 178	
Enter your taxable income		\$42 200			1
Base amount	– \$0	– \$38 190	– \$76 380	– \$124 178	2
Line 1 minus line 2		\$40 10			3
Provincial tax rate	× 9.1%	× 12.1%	× 12.4%	× 14.3%	4
Multiply the amount on line 3 by the tax rate on line 4		\$485.21			5
Tax on the base amount from line 2		+ \$3475	+ \$8096	+ \$14 023	6
Add lines 5 and 6		\$3960.21			7

Provincial tax payable = \$3960.21

5. Craig earns an annual gross salary of \$27 900. If he is paid monthly, calculate his annual and monthly gross pay, deductions, and net pay in the following chart.

$$\text{E.I.} = 0.0183 \times \text{gross annual income}$$

$$\text{C.P.P.} = 0.0495 \times (\text{gross annual income} - \$3500) \quad * \text{ for the first tax bracket:}$$

$$\text{Federal income tax} = * 0.15 \times (\text{gross annual income} - \$10\,822 - \text{E.I.} - \text{C.P.P.})$$

$$\text{Provincial income tax} = * 0.091 \times (\text{gross annual income} - \$9203 - \text{E.I.} - \text{C.P.P.})$$

Gross pay	Annual = \$27 900 Monthly = $\$27\,900 \div 12 = \underline{\$2325.00}$
E.I. deduction	Annual = $0.0183 \times \$27\,900 = \underline{\$510.57}$ Monthly = $\$510.57 \div 12 = \underline{\$42.55}$
C.P.P. deduction	Annual = $0.0495 \times (27\,900 - 3500) = \underline{\$1207.80}$ Monthly = $\$1207.80 \div 12 = \underline{\$100.65}$
Federal tax deduction	Annual = $0.15 \times (27\,900 - 10\,822 - 510.57 - 1207.80)$ Monthly = $\$2303.94 \div 12 = \underline{\$192} = \underline{\$2303.94}$
Provincial tax deduction	Annual = $0.091 \times (27\,900 - 9203 - 510.57 - 1207.80)$ Monthly = $\$1545.06 \div 12 = \underline{\$128.75} = \underline{\$1545.06}$
Net pay	Annual = $\$27\,900 - 510.57 - 1207.80 - 2303.94 - 1545.06 = \underline{\$22\,332.63}$ Monthly = $\underline{\$22\,332.63} \div 12 = \underline{\$1861.05}$

6. What does Craig's employer contribute monthly toward his E.I. and C.P.P.?

$$\text{Employer's monthly contribution to E.I.} = 1.4 \times \$42.55 = \$59.57$$

$$\text{Employer's monthly contribution to C.P.P.} = \$100.65$$

7. In Nova Scotia, the HST is 15%. Jennifer buys a new laptop computer that sells for \$1799 before taxes.

a. How much is the HST? $0.15 \times \$1799 = \underline{\$269.85}$

- b. What is the cost of the computer, including HST?

$$\$1799 + \$269.85 = \underline{\$2068.85}$$

- c. Show a one-step calculation for the total cost of the computer.

$$\$1799 \times 1.15 = \underline{\$2068.85}$$

8. In Manitoba, the 5% GST and 7% PST are calculated separately. Laura buys a new laptop computer that sells for \$1799 before taxes.

a. How much is the GST? $0.05 \times \$1799 = \underline{\$89.95}$

b. How much is the PST? $0.07 \times \$1799 = \underline{\$125.93}$

- c. What is the cost of the computer, including GST and PST?

$$\$1799 + \$89.95 + \$125.93 = \underline{\$2014.88}$$

- d. Show a one-step calculation for the total cost of the computer.

$$\$1799 \times 1.12 = \underline{\$2014.88}$$

9. In PEI, the 10% PST is applied to the *total* of the selling price plus the GST. Sydney buys a new laptop computer that sells for \$1799 before taxes.

a. How much is the GST? $0.05 \times \$1799 = \underline{\$89.95}$

b. How much is the PST? $0.10 \times (\$1799 + 89.95) = \underline{\$188.89}$

- c. What is the cost of the computer, including GST and PST?

$$\$1799 + 89.95 + 188.89 = \underline{\$2077.84}$$

- d. Show a one-step calculation for the total cost.

$$\$1799 \times 1.05 \times 1.10 = \underline{\$2077.84}$$

10. Erica can purchase a new laptop computer that sells for \$1799 plus HST by using a store credit plan. She would pay the HST plus an administration fee of \$39.95 now, and then make 24 monthly payments of \$129.90

- a. What amount would Erica have to pay up-front with the store credit plan?

$$\text{HST} = \$1799 \times 0.13 = \$233.87$$

$$\text{administration fee} = \$39.95$$

$$\text{up-front payment} = \$273.82$$

- b. What *total price* would Erica pay for the computer with the store credit plan?

$$\text{up-front payment} = \$273.82$$

$$\text{total monthly payments} = \$129.90 \times 24 = \$3117.60$$

$$\text{total price (store credit)} = \$3391.42$$

- c. How much would the computer cost, including tax, if she paid *cash* instead of using the store credit plan?

$$\text{total price (cash)} = \$1799 \times 1.13 = \$2032.87$$

- d. If Erica uses the store credit plan, what is the cost of financing?

$$\text{cost of financing} = \text{total price (store credit)} - \text{total price (cash)}$$

$$= \$3391.42 - \$2032.87$$

$$= \$1358.55$$

11. Suppose that Erica used her credit card to buy the computer that costs \$2032.87 including tax. Her credit card company charges an annual interest rate of 18%, or a monthly interest rate of 1.5%. A minimum monthly payment of 3% of the balance or \$10, whichever is greater, is required. Erica decides to make only the minimum required payment each month.

Complete the following table showing Erica's balance, interest charges, and minimum payment amounts for the first 4 months after her purchase:

Month	* Balance	Interest Charges (1.5% of the balance)	Minimum Payment (3% of the balance)
1	2032.87	30.49	60.99
2	2002.37	30.04	60.07
3	1972.34	29.59	59.17
4	1942.76	29.14	58.28
Totals		119.26	238.51

*** Note:** New Balance = Previous Balance + Interest Charges – Minimum Payment

- How much has Erica paid in total after 4 months? \$238.51
- How much of the amount in (a) is interest? \$119.26
- What percent of the purchase price has been paid off after 4 months?

$$\frac{\text{initial balance} - \text{current balance}}{\text{initial balance}} = \frac{\$2032.87 - 1942.76}{\$2032.87} \div 0.04 \div 4\%$$

- Approximately how long will it take for Erica to pay off the entire balance?

$$\frac{100\%}{\text{answer from (c)}} \times 4 \text{ months} = \frac{100\%}{4\%} \times 4 \text{ mths} = 100 \text{ mths} \\ \div 12 \text{ months} = 8 \text{ years}$$

12. Banks, credit unions, and finance companies will lend money to customers to make a variety of purchases. The payment amount and total interest for a loan are affected by the following loan variables: principal, annual interest rate, number of payments per year, and amortization period.

i. What is the principal of a loan?

- the amount borrowed

ii. State the number of payments there are per year if you pay:

a. weekly 52 b. bi-weekly 26 c. monthly 12 d. semi-monthly 24

iii. What is the amortization period of a loan?

- the amount of time it takes to pay back a loan

iv. If all other loan variables are kept constant, but the annual interest rate is increased, then each payment amount will increase and the total interest payable will increase.

v. If all other loan variables are kept constant, but the number of payments per year is increased, then each payment amount will decrease and the total interest payable will decrease.

vi. If all other loan variables are kept constant, but the amortization period is increased, then each payment amount will decrease and the total interest payable will increase.