

## 10-12 – Extension Activity for *Budgeting 101*

### Specific Outcome(s)

- Career and Life Management
  - R1. Identify personal resources, and explain how they could be of value to self and others
    - Examine the fundamentals of getting and using money – basic information on getting an income, deductions, paying taxes, using money for various expenses
- Mathematics 10-3
  - N2. Demonstrate an understanding of income, including
    - wages
    - salary
    - contracts
    - commissions
    - pieceworkto calculate gross pay and net pay

At the end of this extension activity, students will be able to calculate gross and net pay in various situations (e.g., overtime and holidays).

### Materials Needed

- Calculators

### Materials Provided

- Calculating Gross and Net Income handout

### Logistics

- Photocopy the Calculating Gross and Net Income handout 😊
  - Print enough copies for each student.

### Procedure

- Explore students' personal experiences with earning an income and deductions. If you feel comfortable, share your personal experiences with them!
  - "Who has a job? What kind of work do you do?"
  - "What do your paystubs look like? What information is on them?"
  - "How do you receive your paystubs?"
  - "Were you surprised about anything when you got your first paystub? If so, what surprised you?"

- Review the definition of income and the different types of income.
  - “Income is the money you receive in exchange for your goods or your services. There are many types of income:
    - A wage is income you earn from a job. Wages are paid hourly, so the more you work, the more you are paid.
    - A salary is income you earn from a job. Salaries are usually fixed, and they’re usually set annually.
    - Contract income is income earned from contract employment (i.e., you were hired for a fixed amount of time).
    - Commission is (usually) the additional amounts of payment an employee can earn based on their performance.
    - Piecework is when you are paid a fixed amount per task or item.”
  - Share examples with students as you share the definitions. Encourage them to think of examples too!
- Explain the difference between gross income (or pay) and net income (or pay).
  - Gross income is your total earnings *before* deductions (e.g., income tax).
  - Net income is your total earnings *after* deductions.
- Briefly review the information at the top of the provided handout with students. Then, have them complete the practice questions.
  - Depending on students’ confidence with gross and net pay, you may want to guide them through the first few questions using the answer key.
  - Circulate and help students as needed.
- When ready, review the answers with students and what they have learned throughout the lesson. Thank them for their hard work.

## Calculating Gross and Net Income

|                              |  |
|------------------------------|--|
| Employment Insurance (EI)    | Premium rate for 2023: \$1.63 per \$100  |
| Canada Pension Plan (CPP)    | Contribution rate for 2023: 5.95% of gross income  |
| Overtime Pay                 | Overtime is all hours worked over 8 hours a day or 44 hours a week, whichever is greater (8/44 rule)<br><br>An employer must pay an employee overtime pay of at least 1.5 times the employee's regular wage rate for all overtime hours worked |
| Statutory Holiday (Stat) Pay | When a general holiday falls on an employee's non-regular day of work and they work, they are entitled to pay of 1.5 times what they would normally earn for the hours worked  |

- Matthew works as a lifeguard. Use his schedule (see below) to answer the next three questions.

| Wednesday | Thursday | Friday  | Saturday | Sunday | Monday           | Tuesday |
|-----------|----------|---------|----------|--------|------------------|---------|
| 5pm-8pm   | 5pm-8pm  | 3pm-8pm | 3pm-8pm  | Off    | Off              | 5pm-8pm |
| Wednesday | Thursday | Friday  | Saturday | Sunday | Monday           | Tuesday |
| Off       | Off      | 3pm-8pm | 3pm-8pm  | Off    | Stat: 2:30pm-6pm | Off     |

- How many hours did Matthew work in this pay period? Express your answer as a decimal.
- Matthew earns \$17.50 per hour. How much money did he earn when he worked the statutory (stat) holiday?
- What is Matthew's gross income for this pay period?

2. Julie works as a swim instructor. Use her schedule (see below) to answer the next two questions.

| Wednesday | Thursday | Friday     | Saturday | Sunday | Monday | Tuesday    |
|-----------|----------|------------|----------|--------|--------|------------|
| 5pm-8pm   | 5pm-8pm  | 4:45pm-8pm | 10am-8pm | Off    | Off    | 4:45pm-8pm |

- a. How many hours of overtime did Julie work this week? Express your answer as a decimal.

- b. Julie earns \$18.50 per hour. What is her gross pay for this week?

3. Amanda is a car salesperson, and she sells a car for \$26,306. The dealership's profit on the car is \$3,000; Amanda earns 25% commission on the profit. How much does she make in commission from this sale?

4. Chris grossed \$1,032.51 this pay period. He had income tax (\$90.81), EI (\$16.83), CPP (\$61.43), and vision/dental (\$101.99) deducted from his income. How much money will be deposited into his bank account?



## Calculating Gross and Net Income

|                              |  |
|------------------------------|--|
| Employment Insurance (EI)    | Premium rate for 2023: \$1.63 per \$100  |
| Canada Pension Plan (CPP)    | Contribution rate for 2023: 5.95% of gross income  |
| Overtime Pay                 | Overtime is all hours worked over 8 hours a day or 44 hours a week, whichever is greater (8/44 rule)<br><br>An employer must pay an employee overtime pay of at least 1.5 times the employee's regular wage rate for all overtime hours worked |
| Statutory Holiday (Stat) Pay | When a general holiday falls on an employee's non-regular day of work and they work, they are entitled to pay of 1.5 times what they would normally earn for the hours worked  |

1. Matthew works as a lifeguard. Use his schedule (see below) to answer the next three questions.

| Wednesday | Thursday | Friday  | Saturday | Sunday | Monday           | Tuesday |
|-----------|----------|---------|----------|--------|------------------|---------|
| 5pm-8pm   | 5pm-8pm  | 3pm-8pm | 3pm-8pm  | Off    | Off              | 5pm-8pm |
| Wednesday | Thursday | Friday  | Saturday | Sunday | Monday           | Tuesday |
| Off       | Off      | 3pm-8pm | 3pm-8pm  | Off    | Stat: 2:30pm-6pm | Off     |

- a. How many hours did Matthew work in this pay period? Express your answer as a decimal.

$$5\text{pm}-8\text{pm} \rightarrow 3.0\text{hrs} \times 3 \text{ shifts} = 9.0\text{hrs}$$

$$3\text{pm}-8\text{pm} \rightarrow 5.0\text{hrs} \times 4 \text{ shifts} = 20.0\text{hrs}$$

$$2:30\text{pm}-6\text{pm} \rightarrow 3.5\text{hrs} \times 1 \text{ shift} = 3.5\text{hrs}$$

$$9.0\text{hrs} + 20.0\text{hrs} + 3.5\text{hrs} = 32.5\text{hrs}$$

Matthew worked 32.5hrs in this pay period.

- b. Matthew earns \$17.50 per hour. How much money did he earn when he worked the statutory (stat) holiday?

$$3.5\text{hrs} \times \$17.50 \times 1.5 = \$91.88$$

Matthew earned \$91.88 when he worked the stat holiday.

- c. What is Matthew's gross income for this pay period?

$$29.0\text{hrs} \times \$17.50 = \$507.50$$

$$3.5\text{hrs} \times \$17.50 \times 1.5 = \$91.88$$

$$\$507.50 + \$91.88 = \$599.38$$

Matthew's gross income for this pay period is \$599.38.

2. Julie works as a swim instructor. Use her schedule (see below) to answer the next two questions.

| Wednesday | Thursday | Friday     | Saturday | Sunday | Monday | Tuesday    |
|-----------|----------|------------|----------|--------|--------|------------|
| 5pm-8pm   | 5pm-8pm  | 4:45pm-8pm | 10am-8pm | Off    | Off    | 4:45pm-8pm |

- a. How many hours of overtime did Julie work this week? Express your answer as a decimal.

$$10\text{am-}8\text{pm} \rightarrow 10.0\text{hrs} - 8.0\text{hrs} = 2.0\text{hrs}$$

Julie worked 2.0hrs of overtime this week.

- b. Julie earns \$18.50 per hour. What is her gross pay for this week?

$$5\text{pm-}8\text{pm} \rightarrow 3.0\text{hrs} \times 2 \text{ shifts} = 6.0\text{hrs}$$

$$4:45\text{pm-}8\text{pm} \rightarrow 3.25\text{hrs} \times 2 \text{ shifts} = 6.5\text{hrs}$$

$$10\text{am-}8\text{pm} \rightarrow 10.0\text{hrs} \times 1 \text{ shift} = 10.0\text{hrs (with 2.0hrs of overtime)}$$

$$20.5\text{hrs} \times \$18.50 = \$379.25$$

$$2.0\text{hrs} \times \$18.50 \times 1.5 = \$55.50$$

$$\$379.25 + \$55.50 = \$434.75$$

Julie's gross pay for this week is \$434.75.

3. Amanda is a car salesperson, and she sells a car for \$26,306. The dealership's profit on the car is \$3,000; Amanda earns 25% commission on the profit. How much does she make in commission from this sale?

$$\$3,000 \times 0.25 = \$750$$

Amanda earns \$750 in commission from this sale.

4. Chris grossed \$1,032.51 this pay period. He had income tax (\$90.81), EI (\$16.83), CPP (\$61.43), and vision/dental (\$101.99) deducted from his income. How much money will be deposited into his bank account?

$$\$1,032.51 - \$90.81 - \$16.83 - \$61.43 - \$101.99 = \$761.45$$

Chris will have \$761.45 deposited into his bank account.

5. Anna grossed \$3,210.61 this pay period.

- a. How much money will be deducted for EI from her gross pay?

$$\$3,210.61 \div \$100 \times \$1.63 = \$52.33$$

Anna will have \$52.33 deducted for EI from her gross pay.

- b. How much money will be deducted for CPP from her gross pay?

$$\$3,210.61 \times 0.0595 = \$191.03$$

Anna will have \$191.03 deducted for CPP from her gross pay.