

# Workplace Math 10

## Unit 2: Financial Literacy

*Earning an Income*

*Gross and Net Pay*

*Income Tax and Other Deductions*

Name: \_\_\_\_\_



## Vocabulary: Chapter 2

### Earning an Income

<p><b>budget</b></p> <p><small>*this term has been completed for you as an example</small></p>	<p><u>Definition</u></p> <p>an estimate of the amount of money to be spent on a specific project or over a given time frame</p>	<p><u>Diagram/Example:</u> A sample of a personal monthly budget:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="text-align: left;"><b>Net Pay</b></td> <td style="text-align: right;"><b>\$2500</b></td> </tr> <tr> <td>Rent</td> <td style="text-align: right;">\$600</td> </tr> <tr> <td>Telephone</td> <td style="text-align: right;">\$75</td> </tr> <tr> <td>Utilities</td> <td style="text-align: right;">\$75</td> </tr> <tr> <td>Food</td> <td style="text-align: right;">\$500</td> </tr> <tr> <td>Transportation</td> <td style="text-align: right;">\$500</td> </tr> <tr> <td>Clothing</td> <td style="text-align: right;">\$100</td> </tr> <tr> <td style="text-align: left;"><b>Total</b></td> <td style="text-align: right;"><b>\$2,500</b></td> </tr> </table>	<b>Net Pay</b>	<b>\$2500</b>	Rent	\$600	Telephone	\$75	Utilities	\$75	Food	\$500	Transportation	\$500	Clothing	\$100	<b>Total</b>	<b>\$2,500</b>
<b>Net Pay</b>	<b>\$2500</b>																	
Rent	\$600																	
Telephone	\$75																	
Utilities	\$75																	
Food	\$500																	
Transportation	\$500																	
Clothing	\$100																	
<b>Total</b>	<b>\$2,500</b>																	
<p><b>benefits</b></p>	<p><u>Definition</u></p>	<p><u>Diagram/Example</u></p>																
<p><b>biweekly</b></p>	<p><u>Definition</u></p>	<p><u>Diagram/Example</u></p>																
<p><b>bonus</b></p>	<p><u>Definition</u></p>	<p><u>Diagram/Example</u></p>																
<p><b>commission</b></p>	<p><u>Definition</u></p>	<p><u>Diagram/Example</u></p>																

<b>contract</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>deductions</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>gross pay</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>minimum wage</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>net pay</b>	<u>Definition</u>	<u>Diagram/Example</u>

<b>overtime</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>pay statement</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>piecework</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>salary</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>self-employment</b>	<u>Definition</u>	<u>Diagram/Example</u>

<b>semi-monthly</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>shift premium</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>taxable income</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>tip</b>	<u>Definition</u>	<u>Diagram/Example</u>
<b>wage</b>	<u>Definition</u>	<u>Diagram/Example</u>

## **WAYS OF EARNING AN INCOME**

People who work earn their income in different ways. Their **income** is the money they receive for the work they do. The way they are paid depends on the type of job they have.

### **Ways of Earning an Income**

hourly wage	a fixed payment for each hour of work Examples: store clerk, fast-food restaurant worker, etc
wage and tips	an hourly wage plus varying amounts in tips for services provided Examples: hotel worker, taxi driver, waiter/waitress, etc.
salary	a regular fixed payment for work, usually expressed as an amount per year, but paid regularly (e.g. every two weeks, twice a month, or monthly) Examples: firefighter, teacher, etc.
commission	a payment based on a percentage of the worker's sales Examples: real estate agent, car salesperson
salary and commission	a smaller salary plus a percentage of the worker's sales Examples: many different salespeople
royalties	a payment for a piece of work that is marketed and sold Examples: author, musician
piecework	a payment based on the number of items created or completed Examples: sewing machine operator, cable TV installer, factory worker
contract	a payment for a fixed period of time and/or a fixed amount of money for a fixed amount of work Examples: editor, electrical contractor, building contractor

## **ASSIGNMENT 1 – WAYS OF EARNING AN INCOME**

1) Match each job with the most likely payment method.

<b><u>Job</u></b>	<b><u>Payment Method</u></b>
A) video store clerk	___ salary
B) police officer	___ piecework
C) screenplay writer	___ hourly wage
D) tour guide	___ hourly wage and tips
E) fruit picker	___ contract
F) furniture salesperson	___ commission
G) landscape architect	___ royalty

## **GROSS PAY**

Whether you are paid a salary, a wage, or any other manner, your income is the amount of money you receive for the work you do. This income can be paid weekly, biweekly (every two weeks), semi-monthly (twice a month) or monthly. The amount of money you make before any deductions is called your **gross pay**. Deductions – money taken off your paycheque to pay taxes, union dues, and other benefits – will be discussed later in this unit.

It is important to know how to calculate gross pay for different types of jobs.

Example 1: Maria works as an electrician and earns \$24.68/h. If she worked for 15 hours on one job, how much did she earn?

Solution: Multiply the hourly wage by the number of hours she worked.

$$\$24.68 \times 15 \text{ h} = \$370.20 \quad \text{She earned } \$370.20 \text{ on this job.}$$

Example 2: Last year, Michelle earned \$45 183.36 at a hair salon. What was her average monthly income?

Solution: Divide her gross income by the number of months in a year.

$$\$45\,183.36 \div 12 = \$3765.28 \quad \text{Her monthly income was } \$3765.28.$$

Example 3: Chi works cutting lawns. Last week, he worked 34 hours and earned \$329.12. What is his hourly wage?

Solution: Divide his gross income by the number of hours he worked.

$$\$329.12 \div 34 \text{ h} = \$9.68/\text{h} \quad \text{He earns } \$9.68 \text{ per hour.}$$



## **ASSIGNMENT 2 – GROSS PAY**

1) Harpreet works as a carpenter for \$20.87/h. How much will he earn in a 40-hour work week?

2) Ben works in a trucking business and is paid \$35.75/h. Last week he worked the following hours:

Monday – 6 hours

Tuesday – 8 hours

Wednesday – 8 hours

Thursday – 12 hours

What was his gross pay for this week?

3) Jimmy is a flag person and earned \$321.10 last week for 32.5 hours work. What is his hourly wage?

4) Martha's annual salary last year was \$72 000. What was her gross pay each month?

## KEEPING TRACK OF TIME

When an employee is paid an hourly wage, it is necessary to keep track of the hours they have worked in order that the gross pay is calculated correctly. For the purposes of this course, time will be calculated to the quarter hour, not to the minute.

Everyone knows that an hour has 60 minutes. Therefore, parts of hours are based on the whole being 60 minutes as follows:

$$15 \text{ minutes} = 0.25 \text{ hours} = \frac{15}{60} = \frac{1}{4} \text{ hour}$$

$$30 \text{ minutes} = 0.50 \text{ hours} = \frac{30}{60} = \frac{1}{2} \text{ hour}$$

$$45 \text{ minutes} = 0.75 \text{ hours} = \frac{45}{60} = \frac{3}{4} \text{ hour}$$

Example 1: If Mike worked from 8:30 to 11:30. How many hours did he work?

Solution: Subtract the hours from hours and minutes from minutes.

$$\begin{array}{r} 11:30 \\ - 8:30 \\ \hline 3:00 \end{array} \quad \text{Mike worked 3 hours.}$$

Example 2: Mike worked from 8:15 to 11:30. How many hours did he work?

Solution: Subtract the hours from hours and minutes from minutes.

$$\begin{array}{r} 11:30 \\ - 8:15 \\ \hline 3:15 \end{array} \quad \text{Mike worked 3 h 15 min or 3.25 hours or } 3\frac{1}{4} \text{ h}$$

Example 3: If Mike worked from 8:30 to 11:15. How many hours did he work?

Solution: Subtract the hours from hours and minutes from minutes. Regroup the hours to minutes to subtract correctly

1 hour = 60 minutes so 11:15 can be written

$$11 \text{ hr} - 1 \text{ hour (60 min)} = 10 \text{ hours}$$

$$15 \text{ min} + 1 \text{ hour (60 min)} = 75 \text{ minutes}$$

$$\begin{array}{r} 11:15 \\ - 8:30 \\ \hline \end{array} \quad \text{becomes} \quad \begin{array}{r} 10:75 \\ - 8:30 \\ \hline 2:45 \end{array} \quad \text{Mike worked 2 h 45 min, 2.75 h, or } 2\frac{3}{4}$$

Example 4: If Mike worked from 11:15 to 3:30. How many hours did he work?

Solution: Change the afternoon time to 24 hour time. Then subtract the hours from hours and minutes from minutes. Regroup the hours to minutes as necessary.

Any time can be written in 24 hour time by adding 12 hours to those times after noon. So 3:30 can be written:

$$3:30 + 12:00 = 15:30$$

$\begin{array}{r} 3:30 \\ - 11:15 \\ \hline \end{array}$	becomes	$\begin{array}{r} 15:30 \\ - 11:15 \\ \hline 4:15 \end{array}$	Mike worked 4 h 15 min
--	---------	--	------------------------

When adding two portions of time worked, if the time is in hours and minutes, or hours and a fraction for the minutes, add the hours and add the minutes separately. Then, if necessary, regroup the minutes into hours. If the time portions are in decimal form, add the portions as is.

Example 5: If Mike worked from 8:30 to 11:45 and 1:15 to 4:15. How many hours did he work?

Solution: Subtract the hours from hours and minutes from minutes for each portion. Then add the portions and regroup the hours to minutes as necessary.

$\begin{array}{r} 11:45 \\ - 8:30 \\ \hline 3:15 \end{array}$	$\begin{array}{r} 4:15 \\ - 1:15 \\ \hline 3:00 \end{array}$	$\begin{array}{r} 3:15 \\ + 3:00 \\ \hline 6:15 \end{array}$
---	--	--

Mike worked 6 h 15 min, 6.25 h or  $6 \frac{1}{4}$  h

### **ASSIGNMENT 3 – KEEPING TRACK OF TIME**

1) Calculate the hours worked for the following shifts. Show your work.

a) 9:00 to 12:00

b) 1:15 to 3:30

c) 9:15 to 11:45

d) 8:30 to 12:00

e) 10:45 to 2:45

f) 12:30 to 4:15

## **TIME CARDS**

Often employers keep time records for employees using time cards. The employee will enter the times they worked and submit the time card on a regular basis in order to be paid.

Example: Antonio's time card for the last week is below.

a) How many hours did he work in this week?

<b>TIME CARD – Antonio</b>			
DAY	IN	OUT	HOURS WORKED
Monday	9:15	11:45	
Tuesday	8:45	11:30	
Wednesday	1:00	4:30	
Thursday	9:00	12:45	
Friday	9:30	1:00	

Solution: Calculate the hours for each day worked and add them together.

$$\begin{aligned} \text{Monday:} & \quad 11:45 - 9:15 = 2.5 \text{ h} \\ \text{Tuesday:} & \quad 11:30 - 8:45 = 3.25 \text{ h} \\ \text{Wednesday:} & \quad 4:30 - 1:00 = 3.5 \text{ h} \\ \text{Thursday:} & \quad 12:45 - 9:00 = 3.75 \text{ h} \\ \text{Friday:} & \quad 1:00 - 9:30 = 3.5 \text{ h} \\ & \quad \text{Total} - 16.5 \text{ h} \end{aligned}$$

Antonio worked 16 hours this week.

b) If he earns \$14.60 per hour, how much did he earn that week?

Solution: Multiply the number of hours he worked by the his hourly wage.

$$16.5 \text{ h} \times \$14.60 = \$240.90$$

## **ASSIGNMENT 4 – TIME CARDS**

1) Monty works part time at a gas station. He earns \$9.45/h. His time card for one week is shown below.

<b>TIME CARD – Monty</b>			
<b>DAY</b>	<b>IN</b>	<b>OUT</b>	<b>Hours Worked</b>
Monday	3:30	6:45	
Tuesday			
Wednesday	5:00	9:30	
Thursday	5:00	9:30	
Friday	3:30	7:00	

a) How many hours in total did Monty work in this week?

b) How much would Monty earn for this week?

2) Hannah works as a part-time warehouse technician. She often works a split-shift, where her work day is split between two time blocks. She gets paid \$12.76/h. Her time card is shown below.

<b>TIME CARD: Hannah</b>					
<b>DAY</b>	<b>Morning</b>		<b>Afternoon</b>		<b>Total Hours</b>
	<b>IN</b>	<b>OUT</b>	<b>IN</b>	<b>OUT</b>	
Monday	7:45	9:00	5:00	7:45	
Tuesday			4:00	8:00	
Wednesday	9:00	11:00			
Thursday	9:00	11:00	3:00	5:00	
Friday			3:00	6:00	
Saturday	9:00	12:00			

a) How many hours did Hannah work in this week? Show your work.

b) How much did she earn during this week?

## **OVERTIME PAY**

Many full-time jobs have a 40-hour work week, but other jobs may have different regular hours. Either way, if you work more than the regular number of hours you, it is classified as overtime and you will earn overtime pay for those extra hours.

Overtime is often paid at “time and a half” – that means you get 1.5 times your regular wage. Overtime could also be “double time” which means you get 2 times your regular wage. Overtime wages must be agreed upon by the employer and employee before any extra money is paid.

Example: Marcel earns \$15.82/h and he works 37.5 hours each week. He is paid time and a half for any extra hours he works over 37.5 hours each week. If he works 42.25 hours during one week, how much will he earn?

Solution:

First calculate Marcel’s regular wages for 37.5 hours.

$$37.5 \text{ hours} \times \$15.82 = \mathbf{\$593.25}$$

Next, calculate how many hours he is paid an overtime wage.

Total hours – regular hours = overtime hours

$$42.25 - 37.5 = 4.75 \text{ hours overtime}$$

Now calculate Marcel’s overtime wages. He is paid 1.5 times his regular wage.

Regular hourly rate  $\times$  1.5 (overtime)  $\times$  overtime hours = overtime wages

$$\$15.82 \times 1.5 \times 4.75 \text{ hours} = \mathbf{\$112.72}$$

Finally, add Marcel’s regular wages and his overtime wages together.

$$\$593.25 + \$112.72 = \$705.97$$

## **ASSIGNMENT 5 – OVERTIME PAY**

- 1) Ingrid works as a medical receptionist at a rate of \$11.82/h for 35 hours per week. She is paid overtime at time and a half for extra hours she works each week. Last week, she worked 42 hours. What will her weekly pay be for last week?
  
  
  
  
  
  
  
  
  
  
- 2) Natalie works as a playground supervisor for 8 weeks during the summer at a rate of \$15.27/h. She works a 40-hour week but averages 3 hours of overtime each week, paid at time and a half. How much will she earn each week, and for the whole summer?
  
  
  
  
  
  
  
  
  
  
- 3) Pete works in construction and earns \$15.77/h. His regular work week is 40 hours, but he works a lot of overtime in the summer. For overtime from Monday to Friday, he earns time and a half. For Saturdays, he earns double time and a half. How much will Pete earn if he works 42.25 hours during the week, and 5.75 hours on Saturday.



## OTHER WAYS TO EARN AN INCOME

As mentioned at the start of this unit, there are other ways to earn an income that are not wages or salary. These other ways include piecework, commission, salary plus commission, and contract work.

### Example 1: Piecework

Greg works as a tree planter during the summer and earns \$2.50 for each tree he plants. If he planted 45 trees one day, how much did he earn?

Solution: Multiply \$2.50 by 45 trees

$$\$2.50 \times 45 = \$112.50 \quad \text{Greg earned } \$112.50 \text{ that day.}$$

### Example 2:

Marissa works as a flower arranger. She is paid \$143.75 for making 25 identical flower arrangements. How much was she paid for each arrangement?

Solution: Divide \$143.75 by 25 arrangements to find the unit rate.

$$\$143.75 \div 25 = \$5.75 \quad \text{Marissa was paid } \$5.75 \text{ per arrangement.}$$

### Example 3: Commission

Ming works on commission at a rate of 6.5% of his gross sales. If he sold \$9865 worth of furniture last week, how much commission did he earn?

Solution: Multiply his gross sales by his commission rate, as a decimal.

$$\begin{aligned} 6.5\% \div 100 &= 0.065 \\ \$9865 \times 0.065 &= \$641.23 \quad \text{Ming earned } \$641.23 \text{ commission.} \end{aligned}$$

### Example 4:

Gurpreet earned \$416.03 commission on his sales of \$9245. What was his rate of commission?

Solution: Find what percentage \$416.03 is of \$9425. Use a proportion or division.

$$\begin{aligned} \text{part} \div \text{whole} \times 100 &= \text{percentage} \\ \$416.03 \div \$9425 \times 100 &= 4.5\% \quad \text{Gurpreet's rate of commission is } 4.5\%. \end{aligned}$$

### Example 5: Contract Work

Fred is a general contractor who has been hired to fix a client's house. The cost of the materials will be \$785.96, and he will have to hire 2 workers for 8 hours each at a rate of \$12.85/h. He wants to earn at least \$450 for himself. What should he charge the client in the contract?

Solution: Calculate all of Fred's costs to find the overall charge.

Cost of materials: \$785.96

Cost of Labour:  $2 \text{ workers} \times 8 \text{ hours} \times \$12.85/\text{h} = \$205.60$

Fred's income: \$450 minimum

Total cost = materials + labour + Fred's income  
=  $\$785.96 + \$205.60 + \$450$   
= \$1441.56

The total cost for the job is \$1441.56. Fred should charge at least this amount, and would probably round the client's cost to \$1450.

### **ASSIGNMENT 6 – OTHER WAYS TO EARN AN INCOME**

- 1) Thomasina knits sweaters and sells them at a craft shop. She charges \$75.50 for a large sweater. If she sells 5 large sweaters, how much will she earn?
  
  
  
  
  
  
  
  
  
  
- 2) Jack cleans windows for extra income. He charges \$3.00 for a main floor window and \$5.00 for a second-story window. How much will he earn if he cleans a house with 7 main floor windows and 6 second-story windows?
  
  
  
  
  
  
  
  
  
  
- 3) Karissa picked 18 quarts of strawberries and earned \$67.50. How much did she earn per quart?

- 4) Joey is a writer who often writes articles for a local newspaper. He is paid \$0.35 per word for his articles. How many words were in Joey's last article if he was paid \$192.50?
- 5) Sara works in a sports store and earns 12% commission on her sales. How much does she make on a bicycle that sold for \$785.95?
- 6) A real estate agent makes 5% commission on the first \$250 000 of the house's selling price and 2% on any amount over that. What is Sue's commission when she sells a house worth \$375 000?
- 7) What is the rate of commission if you make \$592 on sales of \$12 589?

8) Tien has three employees working for her. Each employee is paid \$8.00/h for an 8-hour day. In addition, they are also paid a commission of 12% on all sales they make. If the three employees made sales of \$785.96, \$453.87, and \$616.42, how much in total must Tien pay her employees for that day of work?

9) A sheet metal company had 5 contracts last month. The contracts were worth \$5600, \$2800, \$7450, \$1900, and \$8900. Materials, salaries, and all other expenses last month totaled \$23 750. What was the percentage of the profits? (Hint: calculate profit by using: profit = income – costs)

## **ADDITIONAL EARNINGS**

In some jobs, an extra amount is earned for a job well done or for exceeding expectations. This bonus payment is paid in addition to regular pay and/or overtime, and could be a lump sum payment or a percentage of earnings. Other additional earnings include danger pay, isolation pay, a shift premium, and tips.

Example 1: Last summer, Jordan earned \$3600 in his job. He has been promised a signing bonus of 15% if he agrees to sign up to work for his company again. If Jordan signs up, how much will he get as a signing bonus?

Solution: Find 15% of Jordan's wages.

$$15\% \div 100 = 0.15$$

$$0.15 \times \$3600 = \$540 \quad \text{Jordan will make \$540 as a signing bonus.}$$

Example 2: Denise works at a computer repair shop. Her boss offers her a shift premium of \$1.75/h if she works after 5:00 pm or on Saturday. Last week, Denise worked:

- Monday: 9:00 am – 5:00 pm
- Tuesday: 2:00 pm – 8:00 pm
- Wednesday: 2:00 pm – 7:00 pm
- Friday: 12:00 pm – 8:00 pm
- Saturday: 9:00 am – 3:00 pm

If Denise's regular pay is \$15.25/h, how much did she earn last week?

Solution: Determine Denise's regular and shift premium hours for each day.

DAY	Regular Hours	Shift Premium Hours
Monday	9:00 – 5:00 = 8 h	0
Tuesday	2:00 – 5:00 = 3 h	5:00 – 8:00 = 3 h
Wednesday	2:00 – 5:00 = 3 h	5:00 – 7:00 = 2 h
Friday	12:00 – 5:00 = 5 h	5:00 – 8:00 = 3 h
Saturday	9:00 – 3:00 = 6 h	0
Total hours	25 hours	8 hours

Calculate Denise's earnings for each rate.

$$\text{Regular hours} - 25 \text{ h} \times \$15.25 = \$381.25$$

$$\text{Shift Premium hours} - 8 \text{ h} \times (15.25 + 1.75) = \$136$$

$$\text{Denise's earnings} = \$381.25 + \$136 = \$517.25$$

Example 3: Sam works as a server at a local restaurant. Yesterday he earned \$165.32 in tips. If this was 15% of the sales, how much were the sales yesterday?

Solution: Use a proportion to solve.

Because a percentage (15%) is always out of 100, use a proportion to find the sales.

$$\frac{\text{part}}{\text{whole}} = \frac{15}{100} = \frac{\$162.32}{x}$$

$$x = \$162.32 \times 100 \div 15 = \$1082 \quad \text{The total sales were } \$1082.$$

### **ASSIGNMENT 7 – ADDITIONAL EARNINGS**

1) Darren's hourly wage is \$24.80. Because his job is dangerous, Sean makes 38% more than Darren. How much would Sean make an hour?

2) Raymond receives a bonus for isolation pay. His regular pay is \$2245/month. He is offered either a bonus of 12% or \$275. Which will give him a higher gross pay?

3) A courier driver is offered a shift premium of \$7.00/h to drive after 8:00 pm. Mike's schedule last week is show below:

- Monday: 12:00 pm – 7:00 pm
- Tuesday: 9:00 am – 5:00 pm
- Wednesday: 6:00 pm – 11:00 pm
- Thursday: 12:00 pm – 8:00 pm
- Friday: 3:00 pm – 9:00 pm

If Mike's regular pay is \$12.75/h, how much did he earn last week?

4) Chen is working for 10 weeks in Northern Canada. He is paid \$532/week and he gets an isolation bonus. The bonus offered is 28% of his total earnings for the 10 weeks, or \$1250. Which is the better option for Chen to choose?

5) Kirsten earns a base wage of \$8.20/h, plus tips. One day she bills her customers \$950, and her tips are 15%. What is Kirsten's income, with tips, for this 8-hour day?

6) Rosita had a meal at a restaurant but only left a \$3.00 tip for a bill that was \$24.75 due to poor service. What percentage tip did she leave?

7) Mason earned \$408.65 working 35 hours at \$8.21/h, plus tips. How much did he make in tips?



## **NET PAY AND DEDUCTIONS**

When you earn an income, your paycheque is always lower than your gross pay. This is because there are deductions from your gross pay. **Deductions** are amounts of money taken off your gross pay for income taxes (federal and provincial/territorial), union dues, disability insurance, employment insurance (EI), Canada Pension Plan (CPP) or other pension plans, and health or other benefits.

Income taxes are only paid on your **taxable income**, which is the income after certain deductions are made but before other deductions are made. Deductions that are deducted to determine your taxable income include union dues, certain company benefits like parking, and company pension plans.

Your **net income** or **net pay** is the final income after all deductions have been taken off your gross pay. It is the amount that is on your paycheque. Net pay is also called take-home pay.

Example 1: John's life insurance is 1.5% of his salary of \$450. How much does he pay for his life insurance?

Solution: Change 1.5% to a decimal and multiply it by his salary.

$$1.5\% \div 100 = 0.015$$

$$0.015 \times \$450 = \$6.75 \quad \text{John pays \$6.75 for his life insurance per paycheque.}$$

Example 2: Jaar's gross pay was \$785. His net pay was \$625.42. How much were his deductions and what percentage of his gross pay were his deductions?

Solution: Subtract to get the deductions and then calculate the percentage.

$$\$785 - \$625.42 = \$159.58 \quad \text{Jaar's deductions were \$159.58}$$

$$\$159.58 \div \$785 \times 100 = 20.33\% \quad \text{Jaar's deductions are about 20.33% of his gross pay.}$$



## DEDUCTION TABLES

Another way to determine deductions for federal tax, provincial/territorial tax, EI, or CPP is to use a deduction table. These are published by the Government of Canada each year for federal rates and for each province/territory.

To use a deduction table, find the taxable income in the left column and read the deduction from the appropriate column on the right side. Tax tables have different claim codes so read them carefully.

Example: A hotel clerk in Whistler, BC earns \$2430 each month. His Claim Code is 2. How much federal and provincial taxes will be deducted from his pay? Use the portions of the deduction tables below to answer the question.

**Federal tax deductions**  
Effective January 1, 2010  
Monthly (12 pay periods a year)  
Also look up the tax deductions  
in the provincial table

Pay Rémunération	Federal claim code:				
	0	1	2	3	4
From Less than De Moins de	Dedu Retene				
2429 - 2463	331.40	201.65	159.25	164.45	139.65
2463 - 2497	336.20	206.40	164.00	169.20	144.40
2497 - 2531	340.95	211.15	168.75	173.95	149.15
2531 - 2565	345.70	215.90	203.50	178.70	153.90
2565 - 2599	350.45	220.70	208.30	183.50	158.70
2599 - 2633	355.20	225.45	213.05	188.25	163.45
2633 - 2667	360.00	230.20	217.80	193.00	168.20
2667 - 2701	364.75	234.95	222.55	197.75	172.95
2701 - 2735	369.50	239.70	227.30	202.50	177.70
2735 - 2769	374.25	244.50	232.10	207.30	182.50
2769 - 2803	379.00	249.25	236.85	212.05	187.25
2803 - 2837	383.75	254.00	241.60	216.80	192.00
2837 - 2871	388.55	258.75	246.35	221.55	196.75
2871 - 2905	393.30	263.50	251.10	226.30	201.50
2905 - 2939	398.05	268.30	255.90	231.10	206.30

**British Columbia provincial tax deductions**  
Effective January 1, 2010  
Monthly (12 pay periods a year)  
Also look up the tax deductions  
in the federal table

Pay Rémunération	Provincial claim code				
	0	1	2	3	4
From Less than De Moins de	De Rete				
2003 - 2021	81.35	34.95	30.50	21.55	12.65
2021 - 2039	82.75	36.40	31.90	23.00	14.05
2039 - 2057	84.20	37.80	33.35	24.40	15.50
2057 - 2075	85.60	39.25	34.75	25.85	16.90
2075 - 2093	87.05	40.65	36.20	27.25	18.35
2093 - 2111	88.45	42.10	37.60	28.70	19.75
2111 - 2129	89.90	43.50	39.05	30.10	21.20
2129 - 2147	91.35	44.95	40.50	31.55	22.60
2147 - 2165	92.75	46.35	41.90	32.95	24.05
2165 - 2183	94.20	47.80	43.35	34.40	25.45
2183 - 2201	95.60	49.20	44.75	35.80	26.90
2201 - 2219	97.05	50.65	46.20	37.25	28.30
2219 - 2237	98.45	52.05	47.60	38.70	29.75
2237 - 2255	99.90	53.50	49.05	40.10	31.15
2255 - 2273	101.30	54.90	50.45	41.55	32.60
2273 - 2291	102.75	56.35	51.90	42.95	34.00
2291 - 2309	104.15	57.80	53.30	44.40	35.45
2309 - 2327	105.60	59.20	54.75	45.80	36.85
2327 - 2345	107.00	60.65	56.15	47.25	38.30
2345 - 2363	108.45	62.05	57.60	48.65	39.75
2363 - 2381	109.85	63.50	59.00	50.10	41.15
2381 - 2399	111.30	64.90	60.45	51.50	42.60
2399 - 2417	112.70	66.35	61.85	52.95	44.00
2417 - 2435	114.15	67.75	63.30	54.35	45.45
2435 - 2453	115.55	69.20	64.70	55.80	46.85
2453 - 2471	117.00	70.60	66.15	57.20	48.30

Solution: Using the tables above, find the appropriate deduction.

First, find the correct range under the "Pay" column that \$2430 falls in. On the Federal chart (left), this is the first line. On the Provincial chart (right) this is the 24<sup>th</sup> line (third from the bottom).

Then move to the right to the column labeled "2" – Claim Code 2. From here, read the deductions as follows:

Federal taxes = \$189.25

Provincial taxes = \$63.30

## ASSIGNMENT 9 – DEDUCTION TABLES

- 1) A worker in Calgary, AB earns \$1391 bi-weekly (every two weeks), and his Claim Code is 3. How much federal and provincial tax will be deducted from his paycheque?

Alberta provincial tax deductions  
Effective January 1, 2008  
Biweekly (26 pay periods a year)  
Also look up the tax deductions  
in the federal table

Pay Rémunération	Provincial			
	0	1	2	3
From Less than De Moins de				
1318 - 1332	124.20	62.05	57.50	48.45
1332 - 1348	125.70	63.55	59.00	49.90
1348 - 1364	127.20	65.05	60.50	51.40
1364 - 1380	128.70	66.55	62.00	52.90
1380 - 1396	130.20	68.05	63.50	54.40
1396 - 1412	131.70	69.55	65.00	55.90
1412 - 1428	133.20	71.00	66.50	57.40
1428 - 1444	134.65	72.50	67.95	58.90
1444 - 1460	136.15	74.00	69.45	60.35
1460 - 1476	137.65	75.50	70.95	61.85
1476 - 1492	139.15	77.00	72.45	63.35
1492 - 1508	140.65	78.50	73.95	64.85
1508 - 1524	142.15	80.00	75.45	66.35
1524 - 1540	143.65	81.50	76.95	67.85
1540 - 1556	145.15	82.95	78.40	69.35
1556 - 1572	146.60	84.45	79.90	70.80

Federal tax deductions  
Effective January 1, 2008  
Biweekly (26 pay periods a year)  
Also look up the tax deductions  
in the provincial table

Pay Rémunération	Federal			
	0	1	2	3
From Less than De Moins de				
1088 - 1104	148.55	93.15	87.60	76.50
1104 - 1120	150.80	95.40	89.85	78.75
1120 - 1136	153.00	97.65	92.10	81.00
1136 - 1152	155.25	99.85	94.30	83.20
1152 - 1168	157.50	102.10	96.55	85.45
1168 - 1184	159.75	104.35	98.80	87.70
1184 - 1200	162.00	106.60	101.05	89.95
1200 - 1216	164.20	108.85	103.30	92.20
1216 - 1232	166.45	111.05	105.50	94.40
1232 - 1248	168.70	113.30	107.75	96.65
1248 - 1264	170.95	115.55	110.00	98.90
1264 - 1280	173.20	117.80	112.25	101.15
1280 - 1296	175.40	120.05	114.50	103.40
1296 - 1312	177.65	122.25	116.70	105.60
1312 - 1328	179.90	124.50	118.95	107.85
1328 - 1344	182.15	126.75	121.20	110.10
1344 - 1360	184.35	129.00	123.45	112.35
1360 - 1376	186.60	131.25	125.70	114.60
1376 - 1392	188.85	133.45	127.90	116.80
1392 - 1408	191.10	135.70	130.15	119.05
1408 - 1424	193.35	137.95	132.40	121.30
1424 - 1440	195.55	140.20	134.65	123.55
1440 - 1456	197.80	142.45	136.90	125.80
1456 - 1472	200.55	145.15	139.60	128.50
1472 - 1488	203.90	148.50	142.95	131.85
1488 - 1504	207.75	151.95	146.90	135.80

## **PAY STATEMENTS**

A **pay statement** is a form that an employer gives each employee that shows gross earnings and deductions from earnings for a pay period. Pay statements can also be used to serve as a record for deduction calculations, and for determining net pay.

Example 1: Examine the simplified pay statement below and answer the following questions.

<b>Employee Name:</b> Jolie			
<b>Company:</b> ABC Elevator Repair		<b>Pay Begin Date:</b> 10/13/2010	
		<b>Pay End Date:</b> 10/19/2010	
<b>General</b>			
<b>Employee ID:</b> 999999		<b>Job Title:</b> Elevator repair apprentice	
<b>Address:</b>		<b>Pay Rate:</b> \$19.00/h <b>Annual:</b>	
<b>Hours and Earnings</b>			
<b>Description</b>	<b>Rate</b>	<b>Hours</b>	<b>Gross Earnings</b>
Regular	19.00/h		\$712.50

a) What is Jolie's hourly rate of pay?

Solution: From the pay statement, Jolie earns \$19.00/hour

b) How many days does the pay period cover?

Solution: The pay period includes 10/13/2010 (Oct. 13, 2010) to 10/19/2010 (Oct. 19, 2010), which covers 7 days.

c) If Jolie's gross earnings are \$712.50, how many hours did she work?

Solution: Divide \$712.50 by \$19.00

$$\$712.50 \div \$19.00 = 37.5 \text{ hours}$$

## **ASSIGNMENT 10 – PAY STATEMENTS**

1) Using the pay statement below for Amanda, answer the following questions.

Employee Name: Amanda				
Company:	Pay Begin Date: 08/17/2008	Net Pay: \$413.88		
	Pay End Date: 08/23/2008	Cheque Date: 08/23/2008		
<b>General</b>		<b>Taxes Data</b>		
Employee ID:	Job Title:	Description	Federal	
Address: 123 Main St. Cochrane, AB	Pay Rate: \$500.00/wk Annual: \$26 000.00	Claim Code	1	
<b>Hours and Earnings</b>		<b>Taxes</b>		
	Current			
Description	Rate	Gross Earnings		
Regular	\$500.00/wk	\$500.00		
			Description	Current
			Federal	\$40.15
			Provincial	\$15.90
			CPP	\$21.42
			EI	\$8.65
			Total	

- a) What is Amanda's gross weekly income?
- b) What is the total of Amanda's weekly deductions?
- c) What is Amanda's net pay?
- d) What percent of her gross pay did she pay in federal taxes?