
Lesson 1

Earning an Income

Outcome

When you complete this lesson, you will be able to

- calculate gross pay based on the way a person earns an income

Overview

There are various ways in which you can earn an income. Some of these include:

1. Wage Earner

This is probably the most common method. You are paid an hourly wage according to some wage scale, overtime hours worked, and the length of time you worked for the company. Wages may also be paid at a daily, weekly, or biweekly (every two weeks) rate of pay. People who work in the service industry, construction industry, manufacturing industry, and/or have part-time jobs are paid a wage.

2. Salary

This form of payment is usually a yearly amount of money that is paid weekly, biweekly, or monthly. Professions such as teachers, engineers, accountants, and administrators are usually paid a salary.

3. Commission

Some salespeople are paid a percentage of the value of the articles sold. This encourages them to sell as much of their company's product as they can.

4. Contract

A person agrees to complete a specific project for which a sum of money is paid when the task is completed.

5. Tips and Gratuities

Workers in service industries such as restaurants and hotels are given tips and gratuities for their service. People who tip use their discretion, but it is usually 10% to 15% of the bill before taxes. At present, some people leave a tip equivalent to the PST and GST (14%).

6. Piecework

Payment by piecework is a method in which an employee is paid for each piece of work produced. Payment is made when the completed article passes an inspection.

7. Self-Employed

People such as farmers and business owners pay themselves as the need arises.

8. Fees-for-Service

This is a fee which is paid for attending a meeting, delivering a speech, or completing a small job in a brief period of time.

The income earned in any one or some combination of the ways outlined determines an employee's **gross income**.

Example 1

Jean worked 25 hours at \$6.80 per hour and earned tips of 15% of customers' food bills. The value of the meals served was \$2000. Find Jean's gross income.

Solution

Regular pay:	25 hours x \$6.80 per hour =	\$170.00
Tips:	2000 x 15% =	<u>\$300.00</u>
Gross pay:		\$470.00

The number of hours worked per week varies. Part-time workers usually work less than 40 hours per week at a specific job, whereas full-time workers usually work an 8-hour shift for 5 days a week amounting to 40 hours. If they work more hours then they are paid overtime. Others may work four 12-hour shifts for 4 days and then get 4 days off.

Overtime rates include time and a half (1.5), double (2), and double time and one half (2.5). The 2.5 rate usually applies to those employees having to work on statutory holidays such as Christmas.

Example 2

John worked 46 hours at \$13.50 per hour. Calculate his gross earnings for the week if overtime is paid after 40 hours and his overtime rate is 1.5 times the regular rate of pay.

Solution

Regular earnings:	40 hours x \$13.50 per hour =	\$540.00
Overtime hours	46 - 40 =	6 hours
Overtime earnings:	6 hours x 13.50 x 1.5 =	<u>\$121.50</u>
Gross earnings:		\$661.50

Example 3

Melissa works an 8-hour day at \$12.60 per hour and is paid time and a half for all hours over eight in a given day. Last week she worked the following hours.

Monday — 9
 Tuesday — 7
 Wednesday — 9
 Thursday — 11
 Friday — 8

Calculate her gross wage.

Solution

Total regular hours:	8 + 7 + 8 + 8 + 8 =	39 hours
Total overtime hours:	1 + 0 + 1 + 3 + 0 =	5 hours
Regular earnings:	39 hours x \$12.60 =	\$491.40
Overtime earnings:	5 hours x \$12.60 x 1.5 =	<u>\$ 94.50</u>
Gross earnings:		\$585.90



Note: You do not take overtime hours to make up the regular hours that were not worked on a particular day.

When a salesperson earns a **straight commission**, payment consists of a single percent commission on all sales.

Example 4

A salesperson receives a straight commission of 7% on all sales. If sales total \$40 500 for the month, calculate the salesperson's gross income.

Solution

Gross income: $\$40\,500 \times 0.07 = \2835

A salesperson may also earn a graduated commission. The rate of commission is graduated or increased as the amount of sales becomes higher. You calculate the commission for each amount of sales, and your gross wage is the total of the individual parts.

Example 5

A salesperson receives an 8% commission on the first \$1000 of sales, and 14% on all sales in excess of \$1000. If the sales for the past week were \$5000, find the salesperson's gross earning.

Solution

8% Commission: $\$1000 \times 8\% = \80.00

14% Commission: $\$4000 \times 14\% = \underline{\$560.00}$

(\$5000 – \$1000 = \$4000)

Gross earnings: $\$640.00$

Some companies pay their salespeople a salary plus commission. The salary is often set low to encourage the employees to sell. The person gets the salary even if they do not sell any products.

Example 6

Joanna is a furniture salesperson who is guaranteed a salary of \$900 a month plus a commission of 6% of all sales. Her total sales for November was \$35 600. Find her gross wage.

Solution

Gross wages = salary + commission
 $= \$900 + \$35\,600 \times 6\%$
 $= \$900 + \2136
 $= \$3036$

Tip: when studying examples, cover the solution and see if you can find the answer yourself first. That can help you to learn more quickly.

Another method of payment is based on a salary plus commission with a quota. The salesperson has a guaranteed salary and receives a commission on sales only after selling a specified amount of the company's products, referred to as a quota. The amount of the quota is subtracted from the employee's total sales before commission is calculated.

Example 7

Joanna is paid a monthly salary of \$1000 and a commission of 10% on all sales over a monthly quota of \$15 000. Calculate her gross earnings for November if she sold \$35 600 worth of furniture.

Solution

Gross wage: = salary + commission on sales over \$15 000

Commission: = $(\$35\,600 - \$15\,000) \times 10\%$
= $20\,600 \times 10\%$
= \$2060

Gross earnings: = $\$1000 + \$2060 = \$3060$

When employees earn income based on piecework, they have to produce work and have it pass an inspection before they get paid.

Example 8

Tim assembles packets of cutlery for the airline industry. He earns 5 cents for each packet assembled. If he assembles 3870 packets per week but 14 of them do not pass the inspection, what is his gross income for the week?

Solution

Number of acceptable packets: $3870 - 14 = 3856$

Gross income: $3856 \times \$0.05 = \192.80

Some companies pay employees on a differentiated piecework arrangement. An employee is paid on a scale where the amount paid per piece increases as the employee's production increases. You multiply the number of acceptable pieces by the amount that applies.

Example 9

Jim is paid on a piecework basis. During a 1-week period, he produces 405 units. Seven units are rejected. He is paid according to the following scale:

Number of Units	Rate per Unit
1 – 90	\$0.55
91 – 180	\$0.75
181 and over	\$0.95

Calculate his gross earnings.

Solution

Number of acceptable units:	$405 - 7 = 398$
Amount earned on the first 90 units:	$90 \times \$0.55 = \$ 49.50$
Amount earned on the next 90 units:	$90 \times \$0.75 = \$ 67.50$
Amount earned on the next 218 units:	$218 \times \$0.95 = \underline{\$207.10}$
Total gross earnings:	$\$324.10$

Self-Marking Activity

1. A waiter earns \$6.25 an hour for a 40-hour week. He makes time and a half for overtime. He worked 46 hours and made \$125 in tips. Find his gross pay.
2. Gina works an 8-hour day at \$11.80 per hour and is paid time and a half for all hours over eight in a given day. Last week she worked the following hours:

Monday — 9

Tuesday — 7

Wednesday — 8

Thursday — 10

Friday — 6

Calculate her gross income.



3. Russell and Sean work for two different companies A and B, respectively. Company A pays employees overtime after 40 hours per week. Company B pays employees overtime after 8 hours in a day. Any overtime is paid at time and a half. Both workers earn \$12.40 per hour and both worked the following hours in the week.

Monday — 10

Tuesday — 6

Wednesday — 10

Thursday — 11

Friday — 10

Determine each employee's gross earnings.

4. Shauna owns a real estate company that charges straight commission of 7% on all house sales. She sold houses valued at \$97 000, \$45 000, and \$108 000. Find the company's gross pay for these sales for the month.
5. Tim sold \$7500 worth of goods. He earned 5% on the first \$3500 and $7\frac{1}{2}\%$ on the remainder. Find his total commission for the week.
6. a) If Patti's commission was \$780 and the rate of commission was 5%, find the amount of her sales.
b) If Patrick received \$95 in commission based on \$3800 sales, what was the rate of commission?
7. One particular week an assembly line worker put in 53 hours (40 were regular hours, 6 hours were paid at time and a half, and the remainder at double time). Find the worker's gross pay if the regular rate of pay was \$17.20 per hour.
8. June's monthly salary is \$650. In addition, she receives 5% commission on the first \$1200 of her sales and 7% on all sales over \$1200. Last month, June sold \$2700 worth of products. What was her gross pay?
9. Tamara receives a monthly salary of \$875 plus $7\frac{1}{4}\%$ on all sales over a monthly quota of \$400. Calculate her monthly gross pay if her sales were \$2180.

10. Paul works for a manufacturing company where he assembles containers. One week he produces 401 containers of which 19 are defective. Using the scale below, calculate his gross earnings.

Number of Containers	Rate per Container
1 – 100	1.35
101 – 300	1.60
over 300	1.80

Check your answers in the Module 1 Answer Key.



Lesson 2

Deductions from Gross Pay, and Net Pay

Outcomes

When you complete this lesson, you will be able to

- calculate deductions from gross wages
- calculate net income

Overview

In Lesson 1, you learned how to calculate gross wages based on a variety of different situations. Gross pay is not the amount of money that you actually take home because certain basic deductions are required by law.

Three basic deductions are as follows:

1. Income Tax

The amount of income tax paid is the sum of federal and provincial income taxes. Provincial income tax is about 50% of the federal income tax. This is a progressive tax because the tax rate increases as more money is earned. There are tax tables available that indicate the amount of income tax paid for weekly, bimonthly, and monthly wages.

The following tax rate table is a general idea of the percentage of taxable income that was deducted in 1998 towards income tax.

Taxable Income	Percent for Income Tax
\$0 - \$569	25.5%
\$569 - \$1138	39%
over \$1138	43.5%

2. Canadian Pension Plan (CPP)

This has a rate set at 3.2% of gross pay to a maximum contribution of \$1068.80 per year. This amount is matched by the employer. The following is an example similar to the Canadian Pension Plan table.

Canada Pension Plan Contributions					
Weekly (52 pay periods a year)					
Pay Rémunération		CPP RPC	Pay Rémunération		CPP RPC
From – De	To – À		From – De	To – À	
428.13	- 434.38	13.80	653.14	- 659.38	21.00
434.39	- 440.63	14.00	659.39	- 665.63	21.20
440.64	- 446.88	14.20	665.64	- 671.88	21.40
446.89	- 453.13	14.40	671.89	- 678.13	21.60
453.14	- 459.38	14.60	678.14	- 684.38	21.80
459.39	- 465.63	14.80	684.39	- 690.63	22.00
465.64	- 471.88	15.00	690.64	- 696.88	22.20
471.89	- 478.13	15.20	696.89	- 703.13	22.40
478.14	- 484.38	15.40	703.14	- 709.38	22.60
484.39	- 490.63	15.60	709.39	- 715.63	22.80
490.64	- 496.88	15.80	715.64	- 721.88	23.00
496.89	- 503.13	16.00	721.89	- 728.13	23.20
503.14	- 509.38	16.20	728.14	- 734.38	23.40
509.39	- 515.63	16.40	734.39	- 740.63	23.60
515.64	- 521.88	16.60	740.64	- 746.88	23.80
521.89	- 528.13	16.80	746.89	- 753.13	24.00
528.14	- 534.38	17.00	753.14	- 759.38	24.20
534.39	- 540.63	17.20	759.39	- 765.63	24.40
540.64	- 546.88	17.40	765.64	- 771.88	24.60
546.89	- 553.13	17.60	771.89	- 778.13	24.80
553.14	- 559.38	17.80	778.14	- 784.38	25.00
559.39	- 565.63	18.00	784.39	- 790.63	25.20
565.64	- 571.88	18.20	790.64	- 796.88	25.40
571.89	- 578.13	18.40	796.89	- 803.13	25.60
578.14	- 584.38	18.60	803.14	- 809.38	25.80
584.39	- 590.63	18.80	809.39	- 815.63	26.00
590.64	- 596.88	19.00	815.64	- 821.88	26.20
596.89	- 603.13	19.20	821.89	- 828.13	26.40
603.14	- 609.38	19.40	828.14	- 834.38	26.60
609.39	- 615.63	19.60	834.39	- 840.63	26.80
615.64	- 621.88	19.80	840.64	- 846.88	27.00
621.89	- 628.13	20.00	846.89	- 853.13	27.20
628.14	- 634.38	20.20	853.14	- 859.38	27.40
634.39	- 640.63	20.40	859.39	- 865.63	27.60
640.64	- 646.88	20.60	865.64	- 871.88	27.80
646.89	- 653.13	20.80	871.89	- 878.13	28.00

Note: CPP tables vary. Use this table for module activities, but not for your 'official' income tax filing.

3. Employment Insurance Premiums (EI)

For 1998, the rate had been set at 2.7% of gross pay to a maximum employee contribution of \$1053.00. The employee has to have worked at least 15 hours per week or had gross earnings of \$156.00 or more per week. The employer has to match the amount paid by the employee. The following is an example of the table for determining Employment Insurance Premiums.

Note: This table is not to be used for income tax calculations outside this module.

Employment Insurance Premiums					
Insurable Earnings Rémunération insurable		EI premium Cotisation d'AE	Insurable Earnings Rémunération insurable		EI premium Cotisation d'AE
From - De	To - À		From - De	To - À	
418.52	- 425.93	11.40	685.20	- 692.59	18.60
425.94	- 433.33	11.60	692.60	- 700.00	18.80
433.33	- 440.74	11.80	700.01	- 707.41	19.00
440.75	- 448.15	12.00	707.42	- 714.81	19.20
448.15	- 455.56	12.20	714.82	- 722.22	19.40
455.57	- 462.96	12.40	722.23	- 729.63	19.60
462.96	- 470.37	12.60	729.64	- 737.04	19.80
470.38	- 477.78	12.80	737.05	- 744.44	20.00
477.78	- 485.19	13.00	744.45	- 751.85	20.20
485.20	- 492.59	13.20	751.86	- 759.26	20.40
492.59	- 500.00	13.40	759.27	- 766.67	20.60
500.01	- 507.41	13.60	766.68	- 774.07	20.80
507.41	- 514.81	13.80	774.08	- 781.48	21.00
514.82	- 522.22	14.00	781.49	- 788.89	21.20
522.22	- 529.63	14.20	788.90	- 796.30	21.40
529.64	- 537.04	14.40	796.31	- 803.70	21.60
537.04	- 544.44	14.60	803.71	- 811.11	21.80
544.45	- 551.85	14.80	811.12	- 818.52	22.00
551.85	- 559.26	15.00	818.53	- 825.93	22.20
559.27	- 566.67	15.20	825.94	- 833.33	22.40
566.67	- 574.07	15.40	833.34	- 840.74	22.60
574.08	- 581.48	15.60	840.75	- 848.15	22.80
581.48	- 588.89	15.80	848.16	- 855.56	23.00
588.90	- 596.30	16.00	855.57	- 862.96	23.20
596.30	- 603.70	16.20	862.97	- 870.37	23.40
603.71	- 611.11	16.40	870.38	- 877.78	23.60
611.11	- 618.52	16.60	877.79	- 885.19	23.80
618.53	- 625.93	16.80	885.20	- 892.59	24.00
625.93	- 633.33	17.00	892.60	- 900.00	24.20
633.34	- 640.74	17.20	900.01	- 907.41	24.40
640.74	- 648.15	17.40	907.42	- 914.81	24.60
648.16	- 655.56	17.60	914.82	- 922.22	24.80
655.56	- 662.96	17.80	922.23	- 929.63	25.00
662.97	- 670.37	18.00	929.64	- 937.04	25.20
670.37	- 677.78	18.20	937.05	- 944.44	25.40
677.79	- 685.19	18.40	944.45	- 951.85	25.60

The appropriate tables are on pages 13-15.

Example 1

For gross weekly wages of \$460, find the following:

- a) CPP contribution
- b) EI premium
- c) income tax deductions (claim code 4)

Solution

- a) CPP contribution

Go to the CPP Table for weekly deductions and find the category that contains \$460. Answer: $(459.39 - 465.63) = \$14.80$

- b) EI premium

Similarly in the EI Premium Table, find the category that contains \$460. Answer: $(\$455.57 - \$462.96) = \$12.40$.

- c) Income Tax

Go to the Tax Rate Table. \$460 is in the \$0—\$569 range. $\$460 \times 25.5\% = 117.3$. Answer: \$117.30 is deducted.

Other deductions that may be deducted by your employer are life insurance premiums, Canada Savings Bonds, union dues, registered savings plan (RSP), and others.

The steps involved in computing your net wages are:

1. Find the CPP contribution.
2. Find the EI premium.
3. Deduct union dues and RSP contribution, if any, from gross wages to obtain the taxable income.
4. Find the income tax on the taxable income found in step 3.
5. From gross wages, subtract CPP contribution, EI premium, union dues (if any), RSP contribution (if any), income tax, and all other deductions.

The resulting figure is the net income.

Example 2

Jim works 40 hours and earns \$13.30 per hour. He pays \$10.40 per week in union dues and contributes \$25.40 per week to a registered savings plan. Using tax, CPP, and EI tables, find his

- a) gross wage
- b) CPP contribution
- c) EI premium
- d) taxable income
- e) income tax deductions
- f) net income

Solution

a) Gross weekly wage: 40 hours \times \$13.30 = \$532

b) CPP: $(\$528.14 - \$534.38) = \$17.00$

c) EI: $(\$529.64 - \$537.04) = \$14.40$

d) Taxable income: = gross wages – registered pension plan – union dues
 $= \$532 - \$25.40 - \$10.40$
 $= \$496.20$

- e) When using the income tax tables, remember to look up the **taxable income** not the gross weekly wage.

$$\text{Income tax} = \$496.20 \times 25.5\% = \$126.53$$

f) Net income:
 $= \text{gross wage} - \text{CPP} - \text{EI} - \text{union dues} -$
 $\text{RSP contribution} - \text{income tax}$
 $= \$532 - \$17.00 - \$14.40 - \$10.40 - \$25.40 - \126.53
 $= \$338.27$

Self-Marking Activity

In Lesson 1 Self-Marking Activity, you determined gross pay. This activity builds on those questions so you can determine net pay. This lesson refers to questions 1, 2, 3, 5, 8, 9, and 10 of Lesson 1 Self-Marking Activity.

For CPP and EI, use tables on pages 14 and 15.

1. The waiter's gross pay was \$431.25. He paid union dues of \$12.50 per week and contributed \$18.20 to an RSP. Find his net pay.
2. Gina's gross income was \$489.70. She paid \$42 per week in union dues. Determine her net pay.
3. Russell's gross earnings with Company A was \$626.20. Sean's gross income was \$638.60 with Company B. Who has the greater net income and by how much?
4. June's gross pay was \$815.00. Find her net pay.
5. Tamara's gross pay was \$1004.05. Her union dues for the week were \$51.20 and her registered pension plan contribution was \$75.00. Determine her net income. Since the CPP and EI tables do not include income over \$1000, use the percentage rates above each of those tables to calculate net income for this question.

6. The following percentages are given to represent the amount deducted for income tax, CPP, and EI.

Taxable Income	Percent for Income Tax
\$0 - \$569	25.5%
\$569 - \$1138	39%
over \$1138	43.5%

CPP: 3.2% of gross pay to a maximum of \$1068.80 per year

EI: 2.7% of gross pay to a maximum of \$1053.00 per year

Complete the following table using those percentages

Gross Income	Income Tax	CPP	EI	Net Income
a) \$428				
b) \$749				
c) \$1523				



Check your answers in the Module 1 Answer Key.