Ways of Earning Income

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>hourly wage</td>
<td>a fixed payment for each hour of work</td>
<td>store clerk, fast-food restaurant worker</td>
</tr>
<tr>
<td>wage and tips</td>
<td>an hourly wage plus varying amounts in tips for services provided</td>
<td>taxi driver, hotel worker</td>
</tr>
<tr>
<td>salary</td>
<td>a regular fixed payment for work, usually expressed as an amount per year but paid regularly (e.g., every two weeks or monthly)</td>
<td>firefighter, teacher</td>
</tr>
<tr>
<td>commission</td>
<td>a payment based on a percentage of the worker's sales</td>
<td>real estate agent, car salesperson</td>
</tr>
<tr>
<td>royalty</td>
<td>a payment for a piece of work that is marketed and sold. The amount is based on a percentage of sales</td>
<td>author, musician</td>
</tr>
<tr>
<td>piecework</td>
<td>a payment based on the number of items created or completed</td>
<td>sewing machine operator, cable TV installer</td>
</tr>
<tr>
<td>contract</td>
<td>a payment for a fixed period of time and/or a fixed amount of money</td>
<td>electrical contractor, editor</td>
</tr>
</tbody>
</table>

Remember:

- There are 365 days or 52 weeks per year.
- Annual means per year.
- A month has between 4 and 5 weeks...so you will need to find annual income before you can find monthly income.
- Semi-monthly means twice per month and 24 times per year (2 x 12).
- Bi-weekly means every two weeks and 26 times per year (52 ÷ 2).
- There are 60 minutes in an hour...so 42 minutes is \( \frac{42}{60} = 0.7 \) hours.
Wages and Salaries

1) A person earns $12.40 per hour and works 32 hours a week. Determine the:
   a. gross weekly earnings.
   \[ 12.40 \times 32 = \$396.80 \]
   b. gross annual earnings
   \[ 396.80 \times 52 = \$20,633.60 \]
   c. gross monthly earnings
   \[ 20,633.60 \div 12 = \$1,719.47 \]

2) A person earns $17.95 per hour and works 37.5 hours a week. Determine the:
   a. gross weekly earnings.
   \[ 17.95 \times 37.5 = \$673.13 \]
   b. gross annual earnings
   \[ 673.13 \times 52 = \$35,002.76 \]
   c. gross monthly earnings
   \[ 35,002.76 \div 12 = \$2,916.90 \]

3) A person works full time in a salaried position and gets paid $1240 semi monthly. Determine the annual income.
   \[ 1240 \times 24 = \$29,760 \]
   \[ \frac{24}{2 \times 12} \]

4) A person works full time in a salaried position and earns $1080 bi-weekly. Determine the annual income.
   \[ 1080 \times 26 = \$28,080 \]
   \[ \frac{26}{52 \div 2} \]

5) A person works full time in a salaried position and earns $2850 bi-weekly. Determine the average monthly income.
   \[ 2850 \times 26 = \$74,100 / year \]
   \[ 74,100 \div 12 = \$6,175 / month \]

6) A person earns $1300 a week and works 20 hours a week. Determine his hourly pay.
   \[ \frac{1300}{20} = \$65 / hour \]

7) A person earns $13852.80 a year and works 18 hours a week. Determine his hourly pay.
   \[ 13852.80 \div 52 = \$266.40 / week \]
   \[ 266.40 \div 18 = \$14.80 / hour \]

8) A person is paid time and a half overtime pay when she works more than 8 hours in a day. Her regular wage is $18.00. Determine her overtime hourly wage and the amount she is paid if she works 10 hours in one day.
   \[ 8 \times 18 = \$144 \text{ reg. pay} \]
   \[ 18 \times 1.5 = \$27 / hour \text{ OT} \]
   \[ 2 \times 27 = \$54 \text{ OT pay} \]
   \[ 144 + 54 = \$198 \]
9) A person is paid time and a half overtime when he works more than 8 hours in a day. His regular wages are $17.30. Determine his overtime hourly wage and the amount he earns if he works 11.75 hours in one day.

\[ 17.30 \times 1.5 = \$25.95 / \text{hour} \]
\[ (8 \times 17.30) + (3.75 \times 25.95) = \$235.71 \]

11) A person earns $17.90 per hour. She does such a great job, her boss gives her a 3.5% raise. Determine her new hourly wage.

\[ 17.90 \times 0.035 = \$0.63 \text{ raise} \]
\[ 17.90 + 0.63 = \$18.53 / \text{hour} \]

10) A person is paid time and a half overtime when he works more than 8 hours in a day. His regular wages are $14.95. He works 10.25 hours per day, 5 days per week. Determine his daily, weekly, annual, and monthly incomes.

\[ (8 \times 14.95) + (2.25 \times 14.95 \times 1.5) = \$170.06 / \text{day} \]
\[ 170.06 \times 5 = \$850.30 / \text{week} \]
\[ 850.30 \times 52 = \$44,215.60 / \text{year} \]
\[ 44,215.60 \div 12 = \$3,684.63 / \text{month} \]

12) A person has an annual salary of $68,400. He does such a poor job, his boss gives him a 2.7% pay cut. Determine his new annual wage.

\[ 68,400 \times 0.027 = \$1,846.80 \text{ cut} \]
\[ 68,400 - 1846.80 = \$66,553.20 \]

13) A person has an hourly wage, plus time and a half for all hours over 8 in a day. One day she works 11 hours and earns $178.13. Determine her regular hourly wage.

\[ (8 \times \text{pay}) + (3 \times \text{pay} \times 1.5) = 178.13 \]
\[ (8 \times \text{pay}) + (4.5 \times \text{pay}) = 178.13 \]
\[ \frac{12.5 \times \text{pay}}{12.5} = \frac{178.13}{12.5} \]

\[ \text{pay} = \$14.25 / \text{hour} \]

BONUS:

14) A person has 2 after school jobs with 2 different hourly wages. One week he works 12 hours at job A and 7 hours at job B and earns $271.40. The next week he works 8 hours at job A and 15 hours at job B and earns $344.20. Determine the 2 hourly wages.

Let \( A = \text{hourly wage at Job A} \)
\( B = \text{hourly wage at Job B} \)

Then \((12A + 7B = 271.40) \times 2\)
\((8A + 15B = 344.20) \times 3\)

\[ 24A + 14B = 542.80 \]
\[- (24A + 45B = 1032.60) \]
\[ -31B = -489.80 \]
\[ -31 \]
\[ B = \$15.80 / \text{hour} \]

\[ 12A + 7 (15.80) = 271.40 \]
\[ 12A = 160.80 \]
\[ A = \$13.40 / \text{hour} \]
Pay Sheet Practice

1. Jim earns $10.50 per hour, plus time and a half for all hours over 40 in one week. Determine his gross pay for the week.

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
<th>Reg Hours</th>
<th>OT Hours</th>
<th>Gross Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>29</td>
<td>0</td>
<td>29 x 10.50 = $304.50</td>
</tr>
</tbody>
</table>

2. Betty earns $12.75 per hour, plus time and a half for all hours over 40 in one week. Determine her gross pay for the week.

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
<th>Reg Hours</th>
<th>OT Hours</th>
<th>Gross Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>4</td>
<td>40</td>
<td>7</td>
<td>(40 x 12.75) + (7 x 12.75 x 1.5) = $643.88</td>
</tr>
</tbody>
</table>

3. Rebecca earns $9.15 per hour, plus time and a half for all hours over 40 in one week. Determine her gross pay for the week.

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
<th>Reg Hours</th>
<th>OT Hours</th>
<th>Gross Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>10.25</td>
<td>11.25</td>
<td>12</td>
<td>11h15min</td>
<td>13</td>
<td>5.5</td>
<td>40</td>
<td>5h30min</td>
<td>6</td>
</tr>
</tbody>
</table>

(40 x 9.15) + (27 x 9.15 x 1.5) = $736.58
4. Karen earns $32.58 per hour, plus time and a half for all hours over 40 in one week. Determine her gross pay for the week.

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
<th>Reg Hours</th>
<th>OT Hours</th>
<th>Gross Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>8h</td>
<td>8h</td>
<td>7h</td>
<td>7h</td>
<td>0</td>
<td>6h</td>
<td>7h</td>
<td>40</td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td>30min</td>
<td>15min</td>
<td>45min</td>
<td>45min</td>
<td>45min</td>
<td>15min</td>
<td>6.75</td>
<td>(40 x 32.58) + (6.25 x 32.58 x 1.5) = $1608.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Wanda earns $14.25 per hour, plus time and a half for all hours over 40 in one week. Determine her gross pay for the week.

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
<th>Reg Hours</th>
<th>OT Hours</th>
<th>Gross Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>5h</td>
<td>7h</td>
<td>8h</td>
<td>6</td>
<td>9h</td>
<td>5h</td>
<td>40</td>
<td>2.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*BONUS:* 160 min = 2.6 h

(40 x 14.25) + (2.6 x 14.25 x 1.5) = $627

6. Wendy earns $17.85 per hour, plus time and a half for all hours over 40 in one week. Determine her gross pay for the week.

<table>
<thead>
<tr>
<th>Day</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>7:53am</td>
<td>8:04am</td>
<td>10:37am</td>
<td>9:43am</td>
<td>10:08am</td>
<td>11:56am</td>
<td></td>
</tr>
<tr>
<td>Finish</td>
<td>4:12pm</td>
<td>3:51pm</td>
<td>7:19pm</td>
<td>10:25pm</td>
<td>9:16pm</td>
<td>4:42pm</td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>8 h</td>
<td>7 h</td>
<td>8 h</td>
<td>12 h</td>
<td>11 h</td>
<td>4 h</td>
<td></td>
</tr>
</tbody>
</table>

19 min 47 min 42 min 42 min 8 min 46 min

50 h 204 min

= 50 h + 3.4 h

= 53.4 h = 40 + 13.4

(40 x 17.85) + (13.4 x 17.85 x 1.5) = $1072.79
Alternative Ways to Earn Money
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1) A sales person earns a 5% commission on his sales. One week he has $2800 in sales. Determine his gross income.

\[ 2800 \times 0.05 = \$140 \]

2) A sales person earns a 3.8% commission on her sales. One week she has $18700 in sales. Determine her gross annual and monthly income, assuming she sells the amount each month.

\[ 18700 \times 0.038 = \$710.60 \text{ /week} \]
\[ 710.60 \times 52 = \$36,951.20 \text{ /year} \]
\[ 36,951.20 \div 12 = \$3079.27 \text{ /month} \]

3) A sales person earns a 4.7% commission on his sales, plus a base salary of $200 per week. One week he has $23000 in sales. Determine his gross income for the week.

\[ 23000 \times 0.047 = \$1081 \]
\[ 1081 + 200 = \$1281 \]

4) A sales person earns a 2.04% commission on his sales, plus a base salary of $8 per hour. One week he has $32700 in sales and works 26 hours. Determine his gross income for the week.

\[ 32700 \times 0.0204 = \$667.08 \]
\[ 26 \times 8 = \$208 \]
\[ 667.08 + 208 = \$875.08 \]

5) A sales person earns a 0.47% commission on his sales, plus a base salary of $11 per hour, plus time and a half for hours over 40 in a week. One week he has $89436 in sales and works 48 hours. Determine his gross income for the week.

\[ 89,436 \times 0.0047 = \$420.35 \]
\[ (40 \times 11) + (8 \times 11 \times 1.5) = \$572 \]
\[ 420.35 + 572 = \$992.35 \]

BONUS:

6) A sales person earns a commission on her sales, plus $12.80 per hour, plus time and a half for hours over 40 in a week. One week she works 43 hours and has $21872 in sales and earns $853.94. Determine her commission percentage.

\[ (40 \times 12.80) + (3 \times 12.80 \times 1.5) = \$569.60 \]
\[ 853.94 - 569.60 = \$284.34 \]
\[ \frac{21872 \times \text{percent}}{21872} = \frac{284.34}{21872} \]
\[ 0.013 = \text{percent} \times 100 \]
\[ = 1.3\% \]
7) A person repairs electronic gadgets. He gets $25 per gadget he fixes, plus $8.75 per hour. One day he works 7h42min and fixes 9 gadgets. Determine his gross pay for the day.

\[
25 \times 9 = \$225 \\
\frac{42}{60} = 0.7 \text{ h} \\
7.7 \times 8.75 = \$67.38 \\
225 + 67.38 = \$292.38
\]

8) A salesperson gets a 2.08% commission, plus an hourly wage of $12.65 per hour, plus time and a half for hours over 40 in a week. One week he works 47 hours and 37 minutes and has $46,984 in sales. Determine his weekly and monthly incomes, assuming he works and sells the same every week.

\[
\frac{37}{60} = 0.61\overline{6} \text{ h} \\
[46,984 \times 0.0208] = \$977.27 \\
(40 \times 12.65) + (7.61\overline{6} \times 12.65 \times 1.5) = \$650.53 \\
977.27 + 650.53 = \$1,627.80/\text{week} \\
1,627.80 \times 52 \div 12 = \$70,538.00/\text{month}
\]

9) A person is offered 2 jobs. Job A pays $14.75 per hour and he would work 35 hours per week. Job B pays a 2.8% commission on sales. How much would he need to sell at job B to earn more in a week?

\[
35 \times 14.75 = \$516.25 \\
\frac{\text{sales} \times 0.028}{0.028} = 516.25 \\
\text{sales} = \$18,438
\]

10) A salesperson earns a 2% commission on her sales. She wants to make $1200 per week. How much will she need to sell?

\[
\frac{\text{sales} \times 0.02 = 1200}{0.02} = \$60,000
\]

11) A salesperson earns a 1.35% commission on his sales. He wants to make $80,000 per year. How much will she need to sell every month?

\[
80,000 \div 12 = \$6,666.67/\text{month} \\
\frac{\text{sales} \times 0.0135}{0.0135} = 6,666.67 \\
\text{sales} = \$493,827.16
\]

12) A salesperson earns a 0.25% commission on his sales. He wants to make $6,500 per month. How much will he need to sell every week?

\[
6,500 \times 12 \div 52 = \$1,500/\text{week} \\
\frac{\text{sales} \times 0.0025}{0.0025} = 1,500 \\
\text{sales} = \$600,000
\]
1) Jimmy earns $13.85 per hour, plus time and a half for hours over 40 in a week. One week he works 46.25 hours. Determine his:

Gross weekly income

Gross Annual Income

Gross Monthly Income

2) Jimmy earns $16.38 per hour, plus time and a half for hours over 40 in a week. One week he works 43h35m. Determine his:

Gross weekly income

Gross Annual Income

Gross Monthly Income

3) Jimmy works 28h24m one week and earns $536.76. Determine his hourly pay.

4) Jimmy works 35 hours per week and is paid $970.67, semi monthly. Determine his hourly pay.

5) Jimmy has an annual salary of $42 800. He receives a 3.5% raise. Determine his new bi-weekly income.

6) Jimmy has an hourly wage, plus time and a half for hours over 40 in a week. One week he works 45h36m and earns $600.16. Determine his hourly wage.
7) Jimmy has 2 after school jobs with different hourly wages. One week he works 13 hours at job A and 5 hours at job B and earns $275.90. The next week he works 10 hours at job A and 12 hours at job B and earns $348.40. Determine the 2 hourly wages.

8) Jimmy works as a salesman and earns a 3.25% commission on his sales, plus 12.80 per hour, plus time and a half for hours over 40 in a week. One week he has $56 872 in sales and works 42h15min. Determine his gross weekly and monthly pay.

9) Jimmy is a salesman and earns a 1.86% commission on his sales. He wants to make $80 000 in a year. How much must he sell every week?

10) Jimmy is offered 2 jobs. Job A pays $18.45 per hour and he would get 36 hours per week. Job B pays a 2.03% commission on sales, plus $10.40 per hour and he would get 25 hours per week. How much would he need to sell at job B in order to make more money at that job?
**Lesson F2 ~ Calculate Income Tax, Other Deductions, and Net Pay**

### Standard Government Deductions

<table>
<thead>
<tr>
<th>Deduction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Tax</td>
<td>A portion of an employee's earnings that federal and provincial governments use to provide services</td>
</tr>
<tr>
<td>Employment Insurance (EI)</td>
<td>A fund that provides a source of income to people who lose their jobs (through no fault of their own) while they look for a new job</td>
</tr>
<tr>
<td>Canada Pension Plan (CPP)</td>
<td>A government fund that provides a monthly pension to workers when they retire</td>
</tr>
</tbody>
</table>

### Optional Deductions

<table>
<thead>
<tr>
<th>Deduction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Pension Plan</td>
<td>A fund that provides a company pension during retirement, in addition to CPP</td>
</tr>
<tr>
<td>Company Health Plan</td>
<td>A plan for medical expenses not covered by other government health care plans</td>
</tr>
<tr>
<td>Life Insurance</td>
<td>A plan that pays a sum of money to a family member or designated beneficiary in the case of an employee's death</td>
</tr>
<tr>
<td>Disability Insurance</td>
<td>A plan that provides a source of income when an employee is injured and unable to work</td>
</tr>
<tr>
<td>Union Dues</td>
<td>A deduction made when an employee belongs to a union. Unions negotiate wages, benefits, and working conditions with employers.</td>
</tr>
<tr>
<td>Payroll Savings</td>
<td>An option for employees to make a regular contribution to a savings plan, such as Canada Savings Bonds</td>
</tr>
<tr>
<td>Charitable Donations</td>
<td>An option for employees to make a regular donation to a charity</td>
</tr>
</tbody>
</table>

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Payroll Deductions and Net Pay

1) A person has a weekly income of $970. Determine their CPP contribution.
   $44.68

2) A person has a weekly income of $1187.46. Determine their EI contribution.
   $22.32

3) A person has a weekly income of $1473.98. They are claim code 1. Determine their Federal tax deduction.
   $218.05

4) A person has a weekly income of $1514.03. They are claim code 6. Determine their Provincial tax deduction.
   $75.75

5) A person has a weekly gross income of $972.28. They are claim code 3. Determine their:
   a. CPP contributions
      $44.80
   b. EI contributions
      $18.28
   c. Federal tax deduction
      $98.70
   d. Provincial tax deduction
      $39.80
   e. total deductions
      $201.58
   f. Net Income
      $770.70

6) A person has a weekly gross income of $923.89. They are claim code 0. Determine their:
   a. CPP contributions
      $42.40
   b. EI contributions
      $17.37
   c. Federal tax deduction
      $130.60
   d. Provincial tax deduction
      $48.60
   e. total deductions
      $238.97
   f. Net Income
      $684.92