7.2 - Gross Pay

Learning Target: calculating gross pay with different types of income and benefits

Toolkit:
- 52 weeks in a year, 26 bi-weekly payments,
- 12 months in a year, 24 semi-monthly payments

Types of Income

- **Hourly wage** a fixed payment for each hour of work
  - Examples: store clerk, fast-food worker
- **Wage and tips** an hourly wage plus varying amounts in tips
  - Examples: taxi driver, pizza delivery
- **Salary** a fixed payment for work, usually expressed as an amount per year but paid regularly
  - Examples: firefighter, teacher
- **Commission** a payment based on a percentage of the worker's sales
  - Examples: real estate agent, car salesperson
- **Royalty** a payment for a piece of work. The amount is based on a percentage of sales
  - Examples: author, musician
- **Piecework** a payment based on the number of items created or completed
  - Examples: Cable TV installer
- **Contract** a payment for a fixed period of time and/or a fixed amount of money
  - Examples: contractor, editor

Gross Pay
Total amount earned before deductions
These may include: salary, wages, tips, bonuses, vacation pay, overtime pay, etc

Ex 1) Denzel works at a tire manufacturing plant and earns $10.20/h on day shift. When he works the evening shift, he earns a shift premium of $2.15/h and when he works the night shift gets time and a half. Last month he worked 80 h on day shift, 40 h on evenings, and 40 h on nights. What was his gross income for the month?

Day: $10.20/h × 80h = $816

Evening: 10.20 + 2.15 = $12.35/h × 40h = $494

Night: 10.20 × 1.5 = $15.30/h × 40h = $612

Gross: $816 + $494 + $612 = **$1922**

Ex 2) Saleem receives a yearly base salary of $42 640, plus a 10% performance bonus, plus 3% holiday pay. What is Saleem's average semi-monthly payment?

$42 640 x 0.1 x $4264 bonus

$42640 x 0.03 = $1279.2 holiday

Gross: $42 640 + $4264 + $1279.2 = $48 183.20

12 months
twice a month
12 x 2 = 24

→ bi-monthly: $48 183.20 ÷ 24 = **$2007.63**

Ex 3) Jasmine sells clothing part time at BB's Boutique. Her monthly salary is $950. She gets 4% commission on the first $15 000 of her sales for the month and 6% commission on sales over $15 000. Jasmine's total sales for September were $28 200. What was Jasmine's gross income for the month?

First $15 000 = $15 000 x 0.04 = $600

Over $15 000 = $28 000 - $15 000 = $13 200 x 0.06 = $792

Gross: $950 + $600 + $792 = **$2342**

Ex 4) Sanjay is a waiter and Jon sells magazine subscriptions. Who has the higher gross annual income?

- Sanjay: $8.00/h 40 h per week $300/week in tips
- Jon: $560/bi-weekly and 4% commission $14490/month in sales

52 weeks / yr
26 bi weekly payments.

Sanjay

$8.00/h x 40h = $320

Gross = $320 + 300 = $620

yearly = $620 x 52 = **$32 240**

Jon

$560 x 26 = $14 560

$14 490 x 0.04 = $579.6

$579.6 x 12 = $6955.20

$14 560 + $6955.20 = **$21 515.20**

Sanjay has the higher income.

7.3 – Taxes and Deductions

Learning Target: calculating EI, CPP and taxes based on gross pay

Toolkit:

- Percent to decimal conversions (5% = 0.05)

Taxes

The Canadian tax system is a progressive system. In a progressive system, everyone pays the same tax rate up to the limit of the first tax bracket. If an income is greater than the limit of the first tax bracket, then the portion of the income over that tax bracket is taxed at the next rate until that limit has been reached, and so on.

Federal Tax			BC Provincial Tax		
2017 Taxable Income	**2017 Tax Rates**	**Maximum amounts**	**2017 Taxable Income**	**2017 Tax Rates**	**Maximum amounts**
$0 - $45 916	15.0%	$6887.4	$0 - $38 898	5.06%	$1968.24
Over $45 916 - $91 831	20.5%	$9412.58	Over $38 898 - $77 797	7.70%	$2995.22
Over $91 831 - $142 353	26.0%	$13 135.72	Over $77 797 - $89 320	10.50%	$1209.92
Over $142 353 - $202 800	29.0%	$17 529.63	Over $89 320 - $108 460	12.29%	$2352.31
Over $202 800	33.0%	No Max	Over $108 460	14.70%	No Max

Federal Taxes = (Gross pay x tax rate) – (tax credits x 0.15)
Provincial Taxes = (Gross pay x tax rate) – (tax credits x 0.0506)

Tax credits

To calculate the final taxes that must be paid, tax credits are subtracted after tax is calculated. Some tax credits that must be subtracted are the federal personal + employment credit amount , BC personal amount, CPP, EI.

Federal Basic Amount and Employment Credit: $12 813

BC Basic Personal Amount: $10207

Canadian Pension Plan (CPP): income set aside for retirement

CPP is calculated by gross pay minus a basic exemption amount multiplied by the current year's rate up to a maximum amount

Gross under 55300 CPP= (gross pay - 3500) x 0.0495
Gross 55300 and over CPP=2564.10

Employment Insurance (EI): income set aside in case of job loss

EI is calculated by gross pay multiplied by the current year's rate up to a maximum amount

Gross under 51300 EI= gross pay x 0.0163
Gross 51 300 and over EI=836.19

Ex1) Determine the amount of CPP and EI to be paid on $37 000 and on $60 000

$ 37 000

CPP = $37 000 − $3500 = $33 500 × 0.0495 = **$1658.25**

EI = $37 000 × 0.0163 = **$603.1**

$ 60 000

CPP = Over $55 300 so max = **$2564.10**

EI = over $51 300 so max = **$836.19**

Ex2) Calculate the total tax to be paid on $40 000

CPP = 40 000 − 3500 = 36500 × 0.0495 = $1806.75

EI = 40 000 × 0.0163 = $652

Total = $1806.75 + $652 = $2458.75

Fed tax

BI = 40 000 × 0.15 = $6000

tax credits = (Fed basic credit + CPP/EI) × 0.15

= $12 813 + $2458.75

= $15 271.75 × 0.15

= $2290.76

Fed tax = $6000 − $2290.76 = $3709.24

Prov tax

B1 = max = $1968.24

B2 = 40 000 − 38 898 = 1102 × 0.077 = $84.85

tax credits = (prov basic + CPP/EI) × 0.0506

= $10 207 + $2458.75

= $12 665.75 × 0.0506

= $640.89

Prov tax = B1 + B2 − credit = $1968.24 + $84.85 − $640.89 = $1412.2

Total tax = Fed tax + Prov tax = $3709.24 + $1412.2 = **$5121.44**

Ex 3) Calculate the total tax that must be paid on $ 90 000.

CPP = max = 2564.10
EI = max = 836.19
Total = $3400.29

Fed tax

B1 = max = $6887.4
B2 = 90000 − 45916 = 44084 × 0.205 = $9037.22
tax credits = (fed basic + CPP/EI) × 0.15
= $12813 + $3400.29 = $16213.29 × 0.15 = $2431.99

Fed tax = B1 + B2 − credit
= $6887.4 + $9037.22 − $2431.99
= $13492.63

Prov tax

B1 = max = 1968.24
B2 = max = 2995.22
B3 = max = 1209.92
B4 = 90000 − 89320 = $680 × 0.1229 = 83.57
tax credit = (prov basic + CPP/EI) × 0.0506
$10207 + $3400.29 = 13607.29
$13607.29 × 0.0506 = $688.53
Prov tax = B1 + B2 + B3 + B4 − credit
= 1968.24 + 2995.22 + 1209.92 + 83.57 − 688.53
= $5568.42

Total tax = Fed + Prov
= $13492.63 + $5568.42
= $19061.05

7.4 Net Pay

Learning Target: calculating net pay with different deductions

Toolkit:
- 52 weeks in a year, 26 bi-weekly payments,
- 12 months in a year, 24 semi-monthly payments

Net Pay
Take home income after deductions

Net Pay = Gross Pay - Deductions

Deductions include:
Federal Income Tax
Provincial Income Tax
Employment Insurance (EI)
Canadian Pension Plan (CPP)
Medical Service Plan (MSP)
Union and professional dues
Registered Retirement Savings Plan (RRSP)

Ex 1) Jasmine is a single person making $60 000 gross pay per year in BC. For the year her federal and provincial taxes total $10 491, CPP is $2544, EI is $955, and MSP is $900. What is her monthly and bi-weekly net pay?

60 000 − 10 491 − 2544 − 955 − 900 = 45 110 net a year

45 110 ÷ 12 = $3759.17 a month

45 110 ÷ 26 = $1735 bi-weekly

Ex 2) Jessie's bi-weekly net pay is $1876. She pays yearly personal annual taxes of $10 287, CPP of $2093, and EI of $678. What is Jessie's hourly gross pay if she works 40 hours a week?

$1876 × 26 = $48 776 net a year

$48 776 + 10287 + 2093 + 678 = $61834 gross a year

$61834 ÷ 52 ÷ 40 = $29.73/h

Ex 3) Todd works 40h a week at $29/h. What is his semi-monthly net pay after paying CPP, EI, and taxes?

Gross = $29 x 40 x 52 = **$60 320**

CPP = max = 2564.10
EI = max = 836.19
CPP + EI = 2564.10 + 836.19 = **$3400.29**

Fed tax
B1 = max = 6887.4
B2 = 60 320 - 45916 = 14 404 x 0.205 = 2952.82
tax credits = (fed basic + CPP/EI) x 0.15
= 12813 + 3400.29 = 16213.29 x 0.15 = 2431.99
Fed tax = 6887.4 + 2952.82 - 2431.99 = **$ 7408.23**

Prov tax
B1 = 1968.24
B2 = 60 320 - 38 898 = 21422 x 0.0506 = 1083.95
tax credits = (prov basic + CPP/EI) x 0.0506
= 10207 + 3400.29 = 13607.29 x 0.0506 = 688.53
Prov tax = 1968.24 + 1083.95 - 688.53 = **$2361.66**

Total tax = Fed + Prov = $7408.23 + $2361.66
= **$9769.89**

Net Pay = Gross - deductions
= gross - CPP - EI - total tax
= $60320 - $3400.29 - $9769.89
= $47,149.82 yearly

$47 149.82 ÷ 24 = **$1964.58**