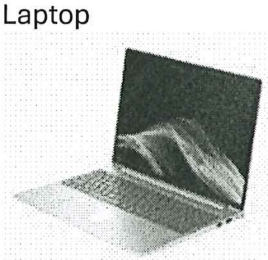
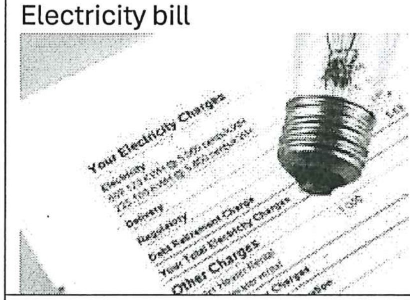
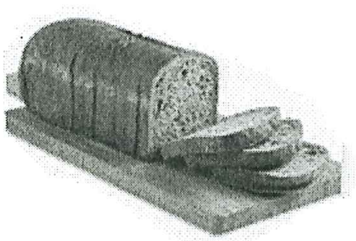
Lesson 8: Review

SOLUTIONS

Section A:

Calculating Taxes: Calculate a percentage of a quantity

Calculate the tax and the total price including tax of these items:

Item	Price before tax	% tax	Tax ($)	Amount to pay
Mars Bar 	$2.30	5%	$5 \div 100 \times 2.30$ $= 0.115$	$2.42
Laptop 	$1500	12%	$12 \div 100 \times 1500$ $= 180$	$1680
Electricity bill 	$180	5%	$5 \div 100 \times 180$ $= 9$	$189
Jeans 	$90	12%	$12 \div 100 \times 90$ $= 10.80$	$100.80
Bread 	$5.50	0% (Some things are tax free!)	0	$5.50

Property Tax

Property tax is paid **once per year** every year by home owners.

People who rent their home do not pay property tax.

Property tax is a percentage of the 'fair market value' of a home.

It is approximately calculated at about 0.5% of a property value.

Calculate the property tax on these three homes. Assume that the 'asking price' is the 'fair market value'.

Home	Property tax, 0.5% fair market value.
 **$425,000** 2883 1st Ave, Port Alberni, British Columbia	~~425000 × 0,5 ÷ 100~~ 0,5 ÷ 100 × 425000 = $2125
 **$719,900** 531 Grewal Pl, Nanaimo, British Columbia	0,5 ÷ 100 × 719900 = $3599,50
 **$2,288,000** 2 4018 W 21ST AVENUE, Vancouver, British Columbia	0,5 ÷ 100 × 2288 000 = $11440

Section 2: Loan Amortization. Mariam borrows $14,000 to buy a car. Here is the amortization of her loan:

Months	Monthly Payment	Interests	Principal	Balance
1	432.28	81.67	350.61	13,649.39
2	432.28	79.62	352.66	13,296.73
3	432.28	77.56	354.72	12,942.01
4	432.28	75.50	356.78	12,585.23
5	432.28	73.41	358.87	12,226.36
6	432.28	71.32	360.96	11,865.40
7	432.28	69.21	363.07	11,502.34
8	432.28	67.10	365.18	11,137.15
9	432.28	64.97	367.31	10,769.84
10	432.28	62.82	369.46	10,400.38
11	432.28	60.67	371.61	10,028.77
12	432.28	58.50	373.78	9,654.99
13	432.28	56.32	375.96	9,279.04
14	432.28	54.13	378.15	8,900.88
15	432.28	51.92	380.36	8,520.52
16	432.28	49.70	382.58	8,137.95
17	432.28	47.47	384.81	7,753.14
18	432.28	45.23	387.05	7,366.09
19	432.28	42.97	389.31	6,976.77
20	432.28	40.70	391.58	6,585.19
21	432.28	38.41	393.87	6,191.33
22	432.28	36.12	396.16	5,795.16
23	432.28	33.81	398.47	5,396.69
24	432.28	31.48	400.80	4,995.89
25	432.28	29.14	403.14	4,592.75
26	432.28	26.79	405.49	4,187.26
27	432.28	24.43	407.85	3,779.41
28	432.28	22.05	410.23	3,369.17
29	432.28	19.65	412.63	2,956.55
30	432.28	17.25	415.03	2,541.51
31	432.28	14.83	417.45	2,124.06
32	432.28	12.39	419.89	1,704.17
33	432.28	9.94	422.34	1,281.83
34	432.28	7.48	424.80	857.03
35	432.28	5.00	427.28	429.75
36	432.25	2.51	429.75	0.00

1. How many months does it take to pay off the loan?

36

2. How much are her monthly payments?

$432.28

3. How much interest does she pay in the first month?

$81.67

4. How much interest does she pay in the 24th month?

$31.48

5. Why does the interest change every month?

Less loan to charge interest on.

6. Name one change Mariam could make that would allow her to pay less interest.

• extra payment
or
• less months.

Section 3: **Property Transfer Tax**

Property **Transfer** Tax is paid only when a person purchases a home.

Property transfer tax is an example of progressive taxation, a mechanism for redistributing a country's wealth.

Calculate the property transfer tax due if a buyer buys this Port Alberni property for $425,000.

PROPERTY TRANSFER TAX #1

$425,000

2883 1st Ave, Port Alberni, British Columbia

Sale Price = 425000

Remainder = sale price - $200,000

remainder = 250000

Enter the 'remainder' into 'Bracket 2'

			TAX
Bracket 1:	200000	$\times 0.01 =$	2000
Bracket 2:	250000	$\times 0.02 =$	5000

Add the tax brackets:

Property transfer tax = 7000

PROPERTY TRANSFER TAX #2

Use this worksheet to calculate the property transfer tax when buying this property for $2,288,000

$2,288,000

2 4018 W 21ST AVENUE, Vancouver, British Columbia

Sale Price = 2288000

Remainder = Sale Price - $2,000,000

remainder = 288 000

Enter the 'remainder' into 'Bracket 3'

			TAX
Bracket 1:	200000	$\times 0.01 =$	2000
Bracket 2:	1800000	$\times 0.02 =$	36000
Bracket 3:	288 000	$\times 0.03 =$	8640

Add the tax brackets:

Property transfer tax = $46 640

PROPERTY TRANSFER TAX #3 (Ext)

Use the information below to calculate the property transfer tax on the Montgomery Avenue property pictured below.

General property transfer tax

The general property transfer tax applies for all taxable transactions. The general property transfer tax rate is:

- 1% of the fair market value up to and including $200,000
- 2% of the fair market value greater than $200,000 and up to and including $2,000,000
- 3% of the fair market value greater than $2,000,000

Further 2% on residential property over $3,000,000

If the property has residential property worth over $3,000,000, a further 2% tax will be applied to the residential property value greater than $3,000,000.

Property Transfer Tax

Sale Price = 3499 000

remainder = 3499 000 − 3000 000 = 499000

$3,499,000

1568 Montgomery Ave, Victoria, British Columbia

3 Bedrooms | 5 Bathrooms | 4823 Square Feet

			TAX
Bracket 1:	200 000	$\times 0.01 =$	2000
Bracket 2:	1800 000	$\times 0.02 =$	36 000
Bracket 3:	1000000	$\times 0.03 =$	30 000
Bracket 4:	499 000	$\times 0.05 =$	24 950

Add the tax brackets:

Property transfer tax = $92 950.

Section 4: Pay Check & Tax Return

Here is a pay slip that has some numbers missing.

Employee Information

Employee Name	Pippa Longstocking
Employer	Thrifty Foods Cashier
Pay Period	May 16–May 31
Pay Date	May 31

THRIFTY FOODS

Earnings

Description	Hours	Rate	Amount
Regular Hours	16	$18.25	(a) $ 292
Overtime Hours	5	$27.40	(b) $ 137.50
Gross Pay			(c) $ 429.50

Deductions

Deduction	Amount
Income Tax	$ 40.75
CPP (6%)	(d) $ 25.77
EI (1.6%)	(e) $ 6.87
Total Deductions	(f) $ 73.39

Net Pay

(g) $ 356.11

Calculate

a) The amount she earned by working 16 hours at $18.25 per hour. $292

b) The amount she earned by working 5 hours at $27.50 per hour. $137.50

c) The total amount she earned in this pay period. $429.50

d) The amount she pays towards Canada Pension Plan (CPP) from this pay check. (6% of total earned). $ 25.77 $6 \div 100 \times 429.50$

e) The amount she pays towards Employment Insurance (EI) from this pay check. (1.6% of total earned). $ 6.87 $1.6 \div 100 \times 429.50$

Progressive Taxation: Income Tax

Pippa's Aunt is a part time librarian and earns an annual salary of $54,000.

Pippa calculates how much income tax comes off of her Aunt's Salary. She uses the tax brackets we used in lesson 7.

Income between $50,000 and $100,000

Annual Income = 54000

Remainder = Income - $50,000

remainder = 4000

Enter the 'remainder' into 'Bracket 3'

			TAX
Bracket 1:	15000	×0.00 =	0
Bracket 2:	35000	×0.20 =	7000
Bracket 3:	4000	×0.30 =	1200

Add the tax brackets:

Income tax = $8200

Pippa calculates her Aunt's CPP contribution: 6% of $54000 = $3240
Next, she calculates her Aunt's EI contribution: 1.6% of $54000 = $ 864
Now she adds up all the deductions. Total Deductions = Income Tax + CPP + EI = $12304
Now she calculates her Aunt's NET PAY: $54000 – (total deductions) = $41696
Now she divides her net pay by 52 to calculate weekly pay. Weekly pay = $801.85
Finally, she multiplies her weekly pay by 2 to calculate biweekly net pay. Biweekly net pay = $1603.70