

HW ???

4. Layla works as a barista, someone who makes and serves coffee in a specialty coffee shop. She earns the minimum wage of \$10.00 an hour, as well as an equal share of any tips that customers leave in a jar by the till.

a) Develop a formula to figure out Layla's gross earnings in a shift, including tips.

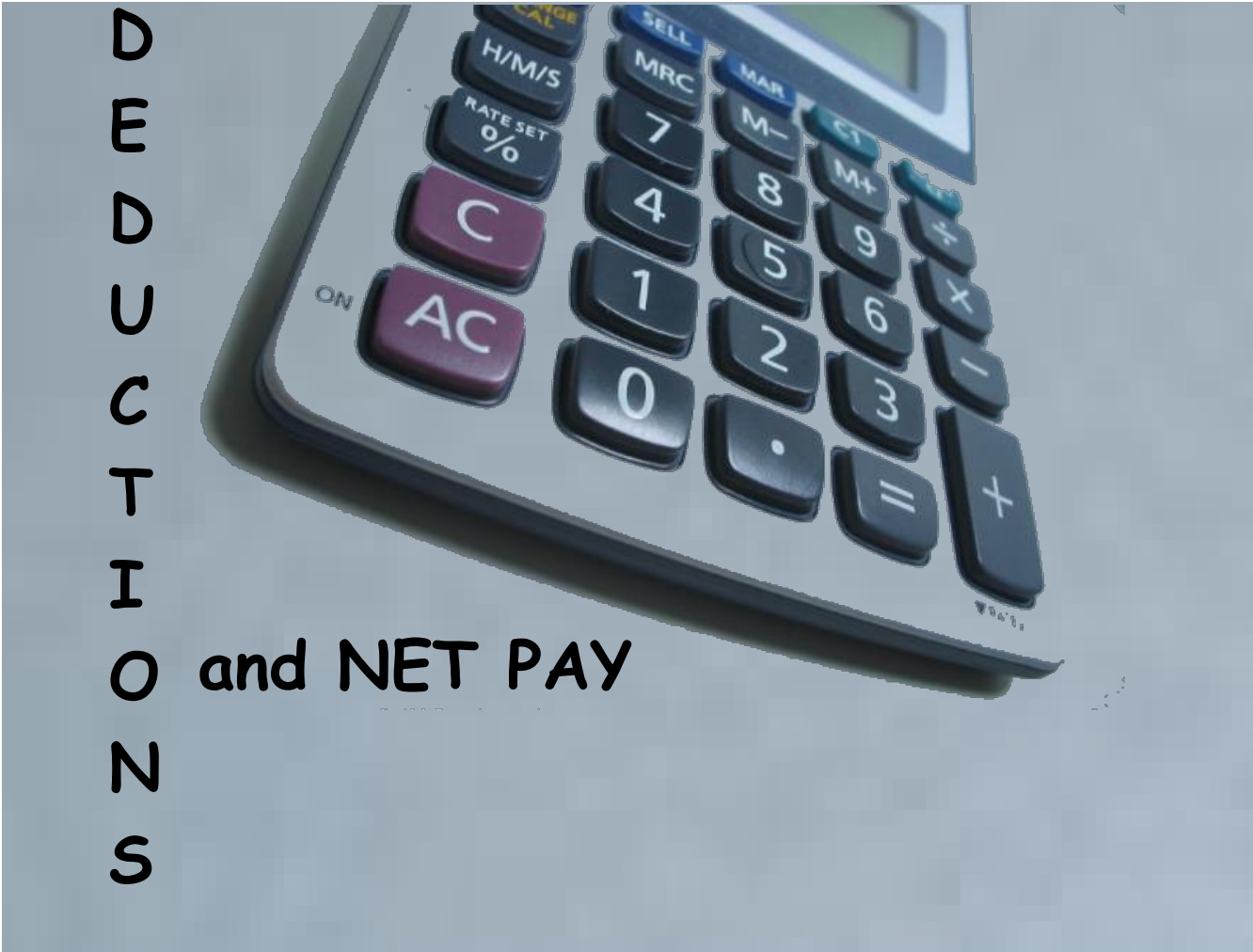
$$\$10 \times \# \text{ of hours} + \frac{\text{tip amount}}{\# \text{ of workers}}$$

b) During Layla's 6-hour shift, the total in tips is \$53.62. There are three people working at the time. Layla determines that she earned \$79.13 for that shift. Is she correct?

$$10 \times 6 + \frac{53.62}{3}$$

$$77.87333333$$







Troy is a graduate of the College of the North Atlantic, from which he received his diploma in graphic design.

MATH ON THE JOB

Brochures, packaging, and calendars are some of the items Troy Templeman designs. He is a self-employed graphic designer who operates his own studio, Troy Templeman Designs. Troy grew up in Logy Bay, Newfoundland, and graduated from Prince of Wales Collegiate in St. John's, NL. In 2000, he obtained his diploma in graphic design.

"As a graphic designer, I use math in my job on a daily basis," Troy says. For example, he uses geometry and geometric shapes in his designs. As well, says Troy, "I use a lot of addition, subtraction, multiplication, and division for pricing, invoices, and measurements."

Self-employed people like Troy often deduct and save a certain percentage of each job they are paid for. This money can go towards paying taxes or medical or dental expenses. Troy spends 17 hours working on a brochure and is paid \$850.00 for the job. He wants to deduct and save 30% of the amount he is paid. What is Troy's hourly wage after this deduction?

SOLUTION

Calculate Troy's hourly wage.

$$\$850.00 \div 17 = \$50.00/\text{h}$$

Calculate 30% of the hourly wage.

$$50 \times 0.30 = 15$$

Subtract from the hourly wage.

$$50 - 15 = \$35.00$$

Troy's earns \$35.00/h after the deduction.



Net Pay: the money paid to an employee after deductions have been made
"Take-home Pay"

Net Pay (Take Home Pay)

- **Deductions** - these are subtracted from your **gross pay**.

-> These are the 3 Standard Deductions.
(rates vary yearly and province to province)

- (1) Employment Insurance (E. I.)
- (2) Income Tax - money for the government.
 - percentage based on your earnings.
- (3) Canadian Pension Plan (CPP) - paid for when you retire (age 60).

- **Other Deductions**

- medical plans
- dental plans
- insurance (car/house/life)
- pension (money after retirement)
- union/association dues (percentage of pay)
- car/house payments

- **Garnished Wages**

- child support
- alimony
- unpaid taxes
- unpaid fines

- **Investments**

- Canada Savings Bond
- TFSA (Tax Free Savings Accounts)
- RRSP/RESP
- Stock Market

Federal & Provincial

"Canada Revenue Agency"

www.cra-arc.gc.ca



→ English



Links for business **Payroll**



Payroll Deductions Online Calculator (PDOC), payroll tables, TD1s, and more



T4032, Payroll Deductions Tables



T4032 - 2011

Scroll down to the bottom of page to choose province

CPP – Canada Pension Plan – money collected by the Federal government from every worker over the age of 19 that will be used to provide an income for workers who reach retirement age (as early as 60 or any time there after).
Canada Pension Plan (CPP)

Important notice

Changes to the rules for deducting Canada Pension Plan (CPP) contributions.

You have to deduct CPP contributions from an employee's remuneration if that employee:

- is 18 to 70 years of age;
- is in pensionable employment during the year;
- is **not** considered to be disabled under the CPP or QPP; **and**
- does **not** receive a CPP or QPP retirement pension.

4.95% CPP

Use the [CPP contributions rates, maximums and exemptions](#) chart, to determine how much CPP contributions to deduct.

As an employer, you must also contribute the same amount of CPP that you deduct from your employees' remuneration.

Quebec employers deduct **Quebec Pension Plan (QPP)** contributions instead of CPP contributions. For information, see [Revenu Québec](#).

EI – Employment Insurance

Employment Insurance (EI)

Employment Insurance (EI)

You have to deduct EI premiums from your employees insurable earnings on **each dollar** up to the [yearly maximum](#). As an employer, you must also contribute 1.4 times the EI premium withheld for each employee.

1.88% EI

Insurable employment includes most employment in Canada under a contract of service (employer-employee relationship).

There is **no age limit** for deducting EI premiums.

<http://www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/clcltng/ei/cnt-chrt-pf-eng.html>


Federal EI premium rates and maximums

Year	Maximum annual insurable earnings	Rate (%)	Maximum annual employee premium	Maximum annual employer premium
2016	\$50,800	1.88	\$955.04	\$1,337.06
2015	\$49,500	1.88	\$930.60	\$1,302.84
2014	\$48,600	1.88	\$913.68	\$1,279.15
2013	\$47,400	1.88	\$891.12	\$1,247.57
2012	\$45,900	1.83	\$839.97	\$1,175.96
2011	\$44,200	1.78	\$786.76	\$1,101.46
2010	\$43,200	1.73	\$747.36	\$1,046.30
2009	\$42,300	1.73	\$731.79	\$1,024.51
2008	\$41,100	1.73	\$711.03	\$995.44
2007	\$40,000	1.80	\$720.00	\$1,008.00
2006	\$39,000	1.87	\$729.30	\$1,021.02
2005	\$39,000	1.95	\$760.50	\$1,064.70
2004	\$39,000	1.98	\$772.20	\$1,081.08
2003	\$39,000	2.10	\$819.00	\$1,146.60
2002	\$39,000	2.20	\$858.00	\$1,201.20
2001	\$39,000	2.25	\$877.50	\$1,228.50
2000	\$39,000	2.40	\$936.00	\$1,310.49

<http://www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/clcltng/cpp-rpc/cnt-chrt-pf-eng.html>

CPP contribution rates, maximums and exemptions

Year	Maximum annual pensionable earnings	Basic exemption amount	Maximum contributory earnings	Employee and employer contribution rate (%)	Maximum annual employee and employer contribution	Maximum annual self-employed contribution
2016	\$54,900	\$3,500	\$51,400	4.95	\$2,544.30	\$5,088.60
2015	\$53,600	\$3,500	\$50,100	4.95	\$2,479.95	\$4,959.90
2014	\$52,500	\$3,500	\$49,000	4.95	\$2,425.50	\$4,851.00
2013	\$51,100	\$3,500	\$47,600	4.95	\$2,356.20	\$4,712.40
2012	\$50,100	\$3,500	\$46,600	4.95	\$2,306.70	\$4,613.40
2011	\$48,300	\$3,500	\$44,800	4.95	\$2,217.60	\$4,435.20
2010	\$47,200	\$3,500	\$43,700	4.95	\$2,163.15	\$4,326.30
2009	\$46,300	\$3,500	\$42,800	4.95	\$2,118.60	\$4,237.20
2008	\$44,900	\$3,500	\$41,400	4.95	\$2,049.30	\$4,098.60
2007	\$43,700	\$3,500	\$40,200	4.95	\$1,989.90	\$3,979.80
2006	\$42,100	\$3,500	\$38,600	4.95	\$1,910.70	\$3,821.40
2005	\$41,100	\$3,500	\$37,600	4.95	\$1,861.20	\$3,722.40
2004	\$40,500	\$3,500	\$37,000	4.95	\$1,831.50	\$3,663.00
2003	\$39,900	\$3,500	\$36,400	4.95	\$1,801.80	\$3,603.60
2002	\$39,100	\$3,500	\$35,600	4.70	\$1,673.20	\$3,346.40
2001	\$38,300	\$3,500	\$34,800	4.30	\$1,496.40	\$2,992.80
2000	\$37,600	\$3,500	\$34,100	3.90	\$1,329.90	\$2,373.00

 <http://www.cra-arc.gc.ca/tx/bsnss/tpcs/pyrll/t4032/2015/menu-eng.html>

Canada Pension Plan (CPP) and Employment Insurance (EI)

CPP contributions for 2015

Maximum pensionable earnings	\$53,600
Annual basic exemption	\$3,500
Maximum contributory earnings	\$50,100
Contribution rate (%)	4.95
Maximum employee contribution	\$2,479.95
Maximum employer contribution.....	\$2,479.95

You stop deducting CPP when the employee reaches the maximum annual contribution for the year.

EI premiums for 2015

Maximum annual insurable earnings.....	\$49,500
Premium rate (%)	1.88
Maximum annual employee premium.....	\$930.60

You stop deducting EI when the employee reaches the maximum annual premium.

 [Tables - Fed_Prov Tax and CPP_EI July 2015.pdf](#)

Weekly Pay \rightarrow \$950

$$\text{CPP} \Rightarrow \frac{950 \times 0.0495}{1} = \$43.69$$

$$1.83\% \times \frac{950}{1} = 2.0188$$

$$17.86$$

$$\text{EI} \Rightarrow \$17.86$$

$$950 \text{ weekly} \times 52$$

$$\begin{array}{r} 49400 \\ - 3500 \\ \hline 45900 \end{array}$$

$$\begin{array}{r} 45900 \div 52 = \\ 882.69 \\ \times 0.0495 \\ \hline 43.69 \end{array}$$

C

There is a "basic yearly exemption" from CPP payments.

\$3500**P**

1. You must calculate the basic pay-period exemption that applies.
($\$3500 / \#$ of pay periods)

2. Subtract the exemption from the gross pay.

P

3. Multiply by 4.95%

**4.95%**



EI

1.88%

What is the Employment Insurance (EI) system?

Employment Insurance is a social program that contributes to the security of all Canadians by providing assistance to workers who lose their jobs and helping unemployed people across the country to get back to work.

Employment Insurance (EI)

You have to deduct EI premiums from your employees insurable earnings on **each dollar** up to the [yearly maximum](#). As an employer, you must also contribute 1.4 times the EI premium withheld for each employee.

Insurable employment includes most employment in Canada under a contract of service (employer-employee relationship).

There is **no age limit** for deducting EI premiums.



People who are self-employed do not have to pay Employment Insurance premiums, but are also not eligible for EI if they find themselves out of work.

WHAT TAX CODE???

Employers have their employees fill out a Personal Tax Credit Return form to determine how much taxes should be taken off each cheque.

School... Disability... Spouse...Caregiver...Infirm dependent...etc. ???

Most employees prefer to be under Code #1 because they will get money back at the end of the year.



Calculating the CPP and EI deductions...

- CPP - in 2015, the rate is 4.95 % of the annual salary less the \$3500 exemption.
[once you earn over \$53 600 - the maximum contribution is \$2479.95]
- EI - in 2015, the rate is 1.88 % of the annual salary.
[once you earn over \$49 500 - the maximum premium is \$930.60]

Employee Name: Amanda		
Company:	Pay Begin Date: 03/08/2011	Net Pay:
	Pay End Date: 03/15/2011	Cheque Date:

General		Taxes Data	
Employee ID:	Job Title:	Description	Federal
Address: 123 Main St. Dartmouth, NS	Pay Rate: \$500.00/wk Annual: \$26 000.00	Claim Code	1

Hours and Earnings			Before-Tax Deductions		Taxes	
		Current	Description	Amt.	Description	
Description	Rate	Gross Earnings	Union Dues		Federal	
Regular	\$500.00/wk	\$500.00	Pension		Provincial	
			Total		CPP	
					EI	
					Total	

$$3500/52 = 67.31$$

$$500 - 67.31 = 432.69$$

$$0.0495(432.69) = 21.42$$

$$0.0188(500) = 9.40$$

OR USE A TABLE

Canada Pension Plan Contributions
Weekly (52 pay periods a year)

Pay Rémunération		CPP RPC	Rén From - De
From - De	To - À		
499.93	- 500.12	21.42	
500.13	- 500.33	21.43	
500.34	- 500.53	21.44	
500.54	- 500.73	21.45	
500.74	- 500.93	21.46	
500.94	- 501.13	21.47	
501.14	- 501.34	21.48	
501.35	- 501.54	21.49	
501.55	- 501.74	21.50	

OR USE A TABLE

Employment Insurance Premiums

Insurable Earnings		EI premium	Insurable Earnings		EI premium
From	To		From	To	
459.85	- 460.37	8.65	498.14	- 498.67	9.37
460.38	- 460.90	8.66	498.68	- 499.20	9.38
460.91	- 461.43	8.67	499.21	- 499.73	9.39
461.44	- 461.96	8.68	499.74	- 500.26	9.40
461.97	- 462.49	8.69	500.27	- 500.79	9.41
462.50	- 463.03	8.70	500.80	- 501.32	9.42
463.04	- 463.56	8.71	501.32	- 501.86	9.43
463.57	- 464.09	8.72	501.87	- 502.39	9.44
464.10	- 464.62	8.73	502.40	- 502.92	9.45

Attachments

Tables - Fed_Prov Tax and CPP_EI July 2015.pdf

Assignment - Earning an Income Dec. 2015.doc