

Financial Mathematics

Name _____

1. Max budgeted C\$175 for souvenirs for his trip to Mexico. How much can Max spend in Mexican Pesos (MXN\$) if C\$1=15.3735 Mexican Pesos?

$$\text{C\$ } 175 \cdot \frac{\text{MXN } 15.3735}{\text{C\$ } 1}$$

- a) MXN \$2690.36 b) MXN \$14.96 c) MXN \$567.83 d) MXN \$3720.54

2. A \$200 pair of sneakers is on sale for 15% off. An additional sale of 25% is advertised for this week only. If the savings of 15% is applied first and the 25% savings is applied afterwards, what is the total percent decrease in price?

$$\begin{aligned} 200 \times 0.15 &= 30 && \frac{200 - 5127.50}{200} \\ 200 - 30 &= 170 && \\ 170 \times 0.25 &= 42.5 && \\ 170 - 42.5 &= 127.50 && \\ &&& = 36.25\% \end{aligned}$$

- a) 40% b) 36% c) 64% d) 60%

3. Angela has a gross bi-weekly income of \$1123. How much will she have to pay in CPP if she works 50 weeks of the year?

$$\begin{aligned} \$1123 \times 25 &= 28075 && 0.0495(28075 - 3500) = \end{aligned}$$

- a) \$1272.05 b) \$4825.36 c) \$1216.46 d) \$1000.00

4. Jen is a hair stylist who works for a base hourly wage of \$12. She works 35 hours per week and receives \$160.50 in tips for the week. What is her gross pay for the week?

$$35(12) + 160.50 =$$

- a) \$580.50 b) \$420 c) \$640.50 d) \$600

5. Salary is defined as:

- a) the amount of money paid to a worker per hour worked
 b) a fixed amount of money paid to a worker on a regular basis
 c) payment for work done in addition to regular hours
 d) amount of money subtracted from gross pay

6. The net pay on a pay stub is:

- a) total pay before deductions b) total amount of deductions
 c) total pay after deductions d) total amount of money paid per hour worked

7. Piecework is a term used to describe

- a) an additional payment made for working undesirable shifts
 b) payment for work done in addition to regular hours
 c) income based on a percentage of sales or services
 d) an amount of money earned per unit of work

8. John earns a gross yearly income of \$69 500. How much will he pay in EI for the year?

$$\begin{aligned} 0.0495(69500 - 3500) & \\ &= \text{Above Max!} \\ &\text{so pick max} \end{aligned}$$

- a) \$1153.70 b) \$3267.00 c) \$858.22 d) \$2593.80

9. As a waitress, Carla earns \$10.40/hour for a 40-hour week and keeps 25% of her tips. In one week, her tips were \$318. What was Carla's gross pay for the week? $40(10.40) + 0.25(318)$

- a) \$734 **b) \$495.50** c) \$800 d) \$416

10. Mark sells heavy equipment. Which of the following would give him the largest gross pay for a week based on \$47 550 in sales?

Option 1: commission of 3% on sales

Option 2: fixed salary of \$900/week plus commission of 1% on sales

Option 3: fixed salary of \$350/week plus commission of 2% on sales

- a) option 1 b) option 2 c) option 3 d) both option 1 & 2

11. Max earns \$14/hr and double time if he works more than 40 hours per week. Calculate his gross pay for the week.

Monday	Tuesday	Wednesday	Thursday	Friday
9:00am-5:00pm	8:30am-6:30pm	9:00am-7:00pm	8:00am-9:00pm	8:00am-6:00pm
8	10	10	13	10
a) \$812	b) \$840	c) \$784	d) \$868	

12. A real estate agent earns 1.86% on the sale of a house. The last house she sold earned her a commission of \$3450. What was the selling price of the house?

- a) \$641 700 b) \$64 170 c) \$185 400 **d) \$185 484**

$$0.0186h = 3450$$

$$h = \frac{3450}{0.0186}$$

Constructed Response

1. Henry sees that 950 g of ground beef is on sale at the Sobeys for \$8.98. At Costco, 3.4 kg is selling for \$33.00.

- a) Which package of ground beef has the lower unit price?

Sobeys is cheaper

* Sobeys $\$8.98/950g = 0.00945/g$
 Costco $\$33.00/3400g = 0.00971/g$

- b) What else should Henry consider when buying the beef?

Local amount needed freshness exp. date

- c) Costco reduces the price of their ground beef to \$29.70. What is the percent decrease? $\frac{33-29.70}{33} \cdot 100 = 10\%$

2. Max found the part he needs to buy for his guitar online. The part is priced in British pounds at £28. The shipping cost is £5.60. The part is also available at Long & McQuade for \$42.50.

	Canadian Dollar	
	C\$1	In C\$
British pound	0.634597	1.5758

- a) Which source has the better price for the part? By how much?

$\pounds 28 + \pounds 5.60 = \pounds 33.60$
 $\pounds 33.60 \cdot 1.5758 = \text{C\$ } 52.95$
 $\text{C\$ } 52.95 - 42.50 = 10.45$

Long & McQuade is \$10.45 cheaper

- b) Where would you recommend that Patrick buy the part? Why?

Long & McQuade b/c it's local no shipping & cheaper

3. Ashley is a personal care worker at a nursing home. This week she worked five overnight shifts:

Monday	Tuesday	Wednesday	Thursday	Friday
11:00pm-6:00am	12:00am-7:00am	11:00pm-5am	12:00am-7am	11:00pm-4:00am

a) How many hours will she work this week? 7 7 6 7 5

32 hours

b) Ashley earns \$13.50 per hour. She also earns an extra \$2 per hour for overnight shifts. What is Ashley's gross pay for the week? $(13.50 + 2.00)(32) = \$496.00$

c) Assume Ashley works the same schedule every week this month. If she is paid biweekly, how much will she receive for each pay? $\$496.00 \cdot 2 = \992.00

4. Jeans are on sale at the Gap. Regular price: \$59.99
 In-store special: 40% off and tax-free
 On-line sale with code: BOGO (+ tax)
 You need to buy two pairs of jeans. Which is the better deal?

$$59.99 \cdot 0.4 = \$24.00$$

$$59.99 - 24.00 = \boxed{\$35.99}$$

$$2 \text{ pairs} = \$71.98$$

5. For a school exchange trip to Europe, your parents have given you C\$500 as spending money.

a) At the bank, you exchange this for Euros, at a rate of 1 EUR = 1.35 CAD. How many Euros will you receive?

$$\frac{C\$500 \cdot \text{EUR } 1}{\text{CAD } 1.35} = \text{EUR } \$370.37$$

b) On return you have 50 Euros left, and you exchange these Euros back into Canadian dollars at a rate of 1 EUR = 1.27 CAD. How much will you have lost (paid to the bank) for the exchange of this 50 Euros back and forth?

$$\text{EUR } \$50 \cdot \text{CAD } 1.27 = \text{CAD } 63.50$$

EUR 1

6. Alex is paid \$15.00 per hour for 40 hours per week. If he works more than 40 hours per week, he makes double time. Alex worked 51 hours last week and 41 hours this week. He is paid biweekly, and pays \$7.50 per week in union fees. Complete the pay stub below (this is his fourth pay for the year):

Earnings Statement							
Employee Name: Landen, Alex							
Period End Date: 2015/05/29							
Earnings				Deductions			
Type	Hours	Rate	Amount	YTD	Type	Current	YTD
Regular	80	15.00	1200	4800	Income Tax	295.23	1180.92
Overtime	12	30.00	360.00	1440.00	EI	32.46	129.84
Vacation Pay 0.04			62.40	249.60	CPP	72.21	288.84
					Union	14.00	56.00
Summary				Gross Pay		Deductions	
Current				1622.40		413.90	
Year to Date				6489.60		1208.50	
						4834.00	