1. Define the following:
2. Wage – Dollar earned per hour(s) worked. (Ex: wage of $15 per hour)
3. Salary – Salary is based on yearly income (Salary of $50,000 per year)
4. Commission – Paid a percentage of what you sell (Commission of 10% of all sales made)
5. Piecework – Paid per unit of work. (Ex: Paid $0.10 per envelope delivered)
6. Calculate each percent:
7. 4% of 300
8. 14.5% of 200
9. 178% of 92

(0.04)(300) = 12 (0.145)(200) = 29 (1.78)(92) = 163.76

1. Calculate the unit price for the following:
2. $72.76 for 60L of gasoline $\frac{\$72.76}{60 L}=\$1.21/L$
3. Eggs are $3.69/dozen $\frac{\$3.69}{12 eggs}=\$0.31/egg$
4. Which has the lower unit price?
5. Yogurt A: $2.99 for 650 ml OR Yogurt B: $3.69 for 800 ml

Yogurt A: $\frac{\$2.99}{650 ml}=\$0.0046/ml $ Yogurt B: $\frac{\$3.69}{800 ml}=\$0.0046125/ml$

Yogurt A is the better buy (but barely!)

1. Roast Beef A from Deli: $2.38/100g or Roast Beef B in package: $5.59 for 300 g pkg.

RB A: $\frac{\$2.38}{100g}=\$0.0238/g$ RB B: $\frac{\$5.59}{300g}=\$0.0186/g$ “B” is the better buy (cheaper!)

1. You need to replace all the wheels on your skateboard, and you find the ones you like at two different stores. Store A has them for $6.19 each, while Store B sells them for $23.50 for a set of four. Which store offers the better deal?

$Store A:\$6.19 per wheel $ $Store B: \frac{\$23.50}{4 wheels}=\$5.88 per wheel (B is better deal)$

1. If Brand X costs $3.99 for 32 oz, let's figure out the unit cost of Brand X

$$\frac{\$3.99}{32oz}=\$0.12 per oz$$

1. If Brand Y costs $4.25 for 3 lbs, let's figure out the unit cost of Brand Y

$$\frac{\$4.25}{3 lbs}=\$1.42 per lb$$

1. If salmon costs $1.89 for 100g, how much will it cost to buy 250g of salmon?

$\frac{\$1.89}{100g}=\frac{x}{250g}$ $\$0.0189=\frac{x}{250g}$

$$\left(0.0189\right)\left(250\right)=x$$

$$x =\$4.73 for 250 grams$$

1. A local plumbing store sells 100 copper-plated pipe straps for $4.97. You have estimated that you require 75 straps. How much will you pay for 75 straps?

$\frac{\$4.97}{100}=\frac{x}{75}$ $0.0497=\frac{x}{75}$

$$\left(0.0497\right)\left(75\right)=x$$

$$\$3.73=x$$

1. Complete the table to find the new sales prices:

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Original Price | Discount | New Price |
| Ipad | $619 | $49 | $570 |
| Ski Jacket | $179.99 | 20% | $143.99 |
| Hat | $29 | ½ off | $14.50 |

1. You make $34,000 annually as an office assistant and get a raise of 2.5%. What is your new salary?

$$\left(\$34,000\right)\left(0.025\right)=\$850 raise$$

$$New Salary=\$34,000+\$850=\$34,850$$

1. Your condo increased in value last year from $249,600 to $263,400. What was the increase as a percentage?

$$\$263,400-\$249,600=\$13,800 increase$$

$$\frac{increase}{total}×100=\frac{\$13,800}{\$249,600}×100=5.5\% increase$$

1. Annie restores and sells antique furniture. She buys a dresser for $150, spends $42 on supplies (like paint) and sells the dresser for $300.
2. What profit did she make? Spent: $150 + $42 = $192

Profit: $300 - $192 = $108

1. What was her profit as a percentage?

$$\frac{profit}{total}×100=\frac{\$108}{\$192}×100=56\%$$

1. Your friend, who works at Futureshop, gives you a deal on a new Ipod, because he can give it to you “at cost”, meaning wholesale price. The retail price was $149, but the wholesale price was only $125. What percent discount did you receive?

$$Discount: \$149-\$125=\$24$$

$$As a \%: \frac{\$24}{\$149}×100=10\%$$

1. Sport Check offers a deal on shoes where you can buy one, and get half-off the second paid. (off of the less expensive pair) You find two pairs you like: one is $119.99, and the other is $99.99.
2. What do you pay, not including taxes?

1st pair: $119.99 Total: $119.99 + $50 = $169.99

2nd pair: $99.99 / 2 = $50.00

1. If taxes are 12%, what would you pay in total?

($169.99)(1.12) = $190.39 OR: ($169.99)(0.12) = $20.39 in tax

 Total = $169.99 + $20.39 = $190.39

1. You need a new laptop, and find the one you must have at two different stores. Best Buy offers you a price of $879 with a 10% discount. Staples has a price of $899 with a $100 mail-in rebate. Which is the better deal?

Best Buy: ($879)(0.10) = $87.90 Staples: $899 - $100 = $799

 $879 - $87.90 = $791.10 🡨 Best Buy is the Better Offer

1. Define
2. Gross pay: pay BEFORE deductions
3. Net Pay: take home pay, AFTER deductions
4. Calculate each person’s gross income:
5. Dan: works 40 hours at $12.25/hr. $\frac{\$12.25}{hr}×40 hrs=\$490$
6. Jill: works 35 hrs for $18/hr. $\frac{\$18}{hr}×35 hrs=\$630 $
7. Taryn works as a plumber. She earns $25.90/hour. If it takes her 21 hours to complete a job, how much will she earn?

$$\frac{\$25.90}{hr}×21 hrs=\$543.90$$

1. Alice earns $7.00/hr and works 10 hours. For each hour she earns on average, 3% of salary in tips. Find her gross pay.

$Wages: \frac{\$7.00}{hr}×10 hrs=\$70.00$ $Tips: \left(0.03\right)\left(\$7\right)=\$0.21 per hour ×10 hrs=\$2.10 $

Total **Gross** : $70.00 + $2.10 = $72.10

1. Ryan only receives commission pay as his gross salary. Ryan 40% commission on his sales. If he sold $5000 work of merchandise, what is his take home pay.

$$\left(0.40\right)\left(\$5000\right)=\$2000 of commission$$

1. Naomi earns $19.40/h for her regular 40-hour work week, and earns time and a half for overtime. What is her gross income if she works 43 hours in a week?

Regular Wages: ($19.40/hr )(40 hrs) = $776 Overtime hrs: 43 hrs – 40 reg hrs = 3 hrs

 Overtime Rate: ($19.40)(1.5) = $29.10/hr

 Overtime Wages: ($29.10/hr)(3 hrs) = $87.30

Total Gross: = $776 + $87.30 = $863.30

1. Sheila earns $20.16 as a home care worker. For overnight shifts, she earns double-time. Calculate her gross income if she works 28 daytime hours and 6 night-shift hours.

Daytime: (28 hrs)($20.16/hr) = $564.48 Overnight Rate of Pay: (2)($20.16) = $40.32/hr @ night

 Overnight Wages: ($40.32/hr)(6hrs) = $241.92

Total Gross: $564.48 + $241.92 = $806.40

1. Calculate the commission each person earns:

a) Pablo earns 3.5% and sells $13,000 worth of goods. (0.035)($13,000) = $455.00

b) Steph earns 4.1% and sells $11,200 worth of goods. (0.041)($11,200) = $459.20

1. Josee earns $8.15/h plus 1.5% commission on all her sales. If she sells $4200 of merchandise last week, what was her gross income if she worked 30 hours?

Wages: ($8.15/hr)(30 hrs) = $244.50 Commission: (0.015)($4200) = $63.00

Total Gross: $244.50 + $63.00 = $307.50

1. You pick daffodils and get paid $715 for packing 156 boxes of flowers. How much did you get paid ‘per’ box?

$$\frac{\$715}{156 boxes}=\$4.58 per box$$

1. Your gross monthly salary is $4108.56. You get deductions taken off at the following rates: income tax: 15%, EI: 1.88% and CPP: 4.95%. (ASSUME NO EXEMPTION FOR CPP)
2. Calculate the monthly deductions:

Income Tax: ($4108.56)(0.15) = $616.28

EI: ($4108.56)(0.0188) = $77.24

CPP: ($4108.56)(0.0495) = $203.37

Total Deductions: $896.89

1. Find the net income for the month

Net Pay = Gross – Deductions: = $4108.56 - $869.89 = $3211.67 per month

1. If you receive a weekly salary of $700.00 (claim code 1) what would be the total amount of deductions (Federal taxes, Provincial Taxes, CPP and EI) and what would be your take home pay?

Fed Tax (see Tables): $62.25

NB Tax (see tables): $45.90

CPP (NO EXEMPTION) ($700)(0.0495) = $34.65

EI: (0.0188)($700) = $13.16

Total deductions: $155.96

Net Pay= Gross – Deductions = $700 - $155.96 = $544.04

1. If you receive a monthly salary of $3,400.00 (claim code 1) what would be the total amount of deductions (Federal taxes, Provincial Taxes, CPP and EI) and what would be your take home pay?

$3400 ÷ 52 weeks = $784.62 gross per week 🡨 NEED THIS AS YOUR TAX TABLES ARE ONLY WEEKLY

Fed Tax (see tables) $74.40 per week x 4 = $297.60 per month

NB Tax (see tables) $54.40 per week x 4 = $217.60 per month

CPP (NO EXEMPTION) (0.0495)($3400) = $168.30 per month

EI (0.0188)($3400) = $63.92 per month

Total Deductions: $747.42

NET PAY: $3400 - $747.42 = $2652.58 per month

1. You are travelling in Europe and find a flight from London to Rome for 142 euros. What would that be in Canadian dollars? (Use the table provided for exchange rates.)

CONVERSION FROM TABLE: 1 Euro = $1.482 CDN

$\frac{1.482 CDN}{x CDN}=\frac{1 euro }{142 euro}$ 🡨 cross multiply

(1.482)(142) = x

x = $210.44 CDN

1. When in Rome, you find a sweater that costs 38 euros. You know that you can find the same sweater back home for around $30 CDN. Compare the two prices. (SAME CONVERSION FACTOR)

$\frac{1.482 CDN}{x CDN}=\frac{1 euro }{38 euro}$ 🡨 cross multiply

(1.482)(38) = x

x = $56.32 CDN

*You should wait to buy the sweater in Canada as it is cheaper in CDN dollars there.*

1. You are going to Mexico for Spring Break and can afford to take $400 spending money with you. How many Mexican pesos will you have for your trip?

CONVERSION FROM TABLE: 1 Peso = $0.081 CDN

$\frac{0081 CDN}{\$400 CDN}=\frac{1 peso }{X peso}$ 🡨 cross multiply

0.081x = 400

x = 4938 pesos

1. Rearrange the simple interest formula : I=PRT for each variable:

$P=\frac{I}{\left(R\right)(T)}$ $R=\frac{I}{\left(P\right)(T)}$ $T=\frac{I}{\left(P\right)(R)}$

1. If the simple interest is $75.00 on an investment at 2.50% per annum for 3 years, what is the principal?

I = $75 $P=\frac{I}{\left(R\right)(T)}=\frac{75}{(0.0250)(3)}=\$1000$

P = ?

R = 2.50% = 0.0250 Principal amount = $1000, you therefore would have $1075 in total now.

T = 3 years

1. A local bank is advertising that you can double your money in eight years if you invest with them. Suppose you have $1000 to invest. What interest rate is the bank offering?

If you doubled your money you would have $2000 in total, but had earned $1000 in interest

I = $1000 $ R=\frac{I}{\left(P\right)(T)} =\frac{1000}{(1000)(8)}=\frac{1}{8}=0.125 $

P = $1000

R =? As a percent: 12.5% interest

T = 8 years

1. Randy wants to move his savings account to a new bank that pays a better interest rate of 3.5% so that he can earn $100 in interest faster than at his old bank. If he moves $800 to the new bank, how long will it take him to earn the $100 in interest?

I = $100 $ T=\frac{I}{\left(P\right)(R)} =\frac{100}{(800)(0.035)}=3.6 years $

P = $800

R = 0.035

T = ?

1. An investment of $7000. Is made with interest at 4.50% per annum, compounded annually, for 2 years. Determine the value of the investment at the end of 2 years.

A = ? $A=P\left(1+\frac{r}{n}\right)^{nt}$ $A=7000\left(1+\frac{0.045}{1}\right)^{(1)(2)}$

P = 7000 $A=7000\left(1.045\right)^{2}$

r = 0.045 $A=7000(1.092)$

n = 1 (once a yr) A = $7644.18

t = 2

1. a) Emily borrowed $10, 400 for 4 years at 12.7% per year and the interest is compounded semi-annually. What is the total she will pay back?

A = ? $A=P\left(1+\frac{r}{n}\right)^{nt}$ $A=10,400\left(1+\frac{0.127}{2}\right)^{(2)(4)}$

P = 10,400 $A=10,400\left(1.0635..\right)^{8}$

r = 0.127 $A=10,400(1.636..)$

n = 2 (twice a yr) A = $17,018.97

t = 4 yrs

b) How much interest did she pay? Final – initial = $17,018.97 - $10,400 = $6618.97

1. Jason invested $5300 for 2 years. He earns 2.9% per year and his interest is compounded monthly. What is his total value on this investment?

A = ? $A=P\left(1+\frac{r}{n}\right)^{nt}$ $A=5300\left(1+\frac{0.029}{12}\right)^{(12)(2)}$

P = 5300 $A=5300\left(1.0024..\right)^{24}$

r = 0.029 $A=5300(1.0596..)$

n = 12 (monthly) A = $5616.10

t = 2 yrs