

# Business Math: Chapter 1 Answer Key

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1) Solve for weekly pay:  $\frac{\$43,500}{52 \text{ weeks}} = \$836.54/\text{week}$

Solve for hourly pay:  $\frac{\$836.54}{35 \text{ hours}} = \$23.90/\text{hour}$

Solve for overtime pay =  $\$23.90 \times 1.5 = \$35.85/\text{overtime hour}$

Solve for overtime hours =  $40 - 35 = 5$        $5 + 7 = 12$

$42 - 35 = 7$

Total Overtime Pay =  $12 \times \$35.85 = \$430.20$

Total Regular Pay =  $\$836.54 \times 2 = \$1673.08$

(biweekly)

Total Pay with overtime =  $\$1673.08 + \$430.20 = \underline{\underline{\$2103.28}}$

2) Set up a time table: Sat Sun Mon Tues Wed Thurs Fri

4 4 7.5 9.5 7.5 8.5 7.5

Calculate the number of overtime hours (weekends + more than 7.5 on weekday)

Sat Sun Mon Tues Wed Thurs Fri  
4 4 7.5 9.5 7.5 8.5 7.5

OT  $\overline{4} + \overline{4} + \overline{0} + \overline{2} + \overline{0} + \overline{1} + \overline{0} = 11 \text{ hours}$

Solve for overtime pay =  $\$20.75 \times 1.5 = \$31.125 \uparrow \$31.13/\text{hour}^{\text{overtime}}$

Total Regular Pay =  $(7.5 \text{ hours/day} \times 5 \text{ days}) \times \$20.75$   
 $37.5 \times \$20.75 = \$778.13$

Total Overtime Pay =  $11 \times \$31.13 = \$342.43$

Total Pay with overtime =  $\$778.13 + \$342.43 = \underline{\underline{\$1120.56}}$

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3) Total Regular Pay = (8 hrs/day x 5 days) x \$9.50  
 = 40 x \$9.50 = \$380

Calculate Piecework: Mon Tues Wed Thurs Fri  
 Quota = 20 units/day      22      25      24      26      29  
                                  -20      -20      -20      -20      -20  
                                  2 + 5 + 4 + 6 + 9 = 26

Total Piecework pay = 26 x \$4 = \$104

Total Pay with Piecework = \$380 + \$104 = \$484

4) Calculate 1<sup>st</sup> level = \$50,000 x 5% = \$2,500

Calculate 2<sup>nd</sup> level = \$50,000 x 11% = \$5,500

Calculate 3<sup>rd</sup> level = (\$125,000 - \$50,000 - \$50,000) x 18%  
 = \$25,000 x 18% = \$4,500

Total Pay = \$2,500 + \$5,500 + \$4,500 = \$12,500

Quarter	Purchases	Sales	Difference
1	\$684,125	- \$846,250	= <del>(\$162,125) x 5% = \$8,106.25</del>
2	\$1,051,250	- \$759,375	= \$291,875 x 5% = \$14,593.75
3	\$762,585	- \$989,565	= <(\$226,980) x 5% = \$11,349>
4	\$867,955	- \$1,025,325	= <(\$157,370) x 5% = \$7,868.50>

Quarter

1 \$8,160.25 Remittance

2 \$14,593.75 Refund

3 \$11,349 Remittance

4 \$7,868.50 Remittance

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6) a) Alberta: 0% PST 5% GST

$$\text{Calculate GST} = \$28650 \times 5\% = \$1432.50$$

$$\text{Calculate PST} = \$28650 \times 0\% = \$0$$

$$\begin{aligned} \text{Calculate Total Purchase Price} &= \$28650 + \$1432.50 + \$0 \\ &= \underline{\underline{\$30082.50}} \end{aligned}$$

b) Manitoba: 8% PST 5% GST

$$\text{Calculate GST} = \$28650 \times 5\% = \$1432.50$$

$$\text{Calculate PST} = \$28650 \times 8\% = \$2292$$

$$\begin{aligned} \text{Calculate Total Purchase Price} &= \$28650 + \$1432.50 + \$2292 \\ &= \underline{\underline{\$32374.50}} \end{aligned}$$

c) Quebec: 5% GST 7.5% (Sales + GST) PST

$$\text{Calculate GST} = \$28650 \times 5\% = \$1432.50$$

$$\text{Add GST to Sale} = \$28650 + \$1432.50 = \$30082.50$$

$$\text{Calculate PST} = \$30082.50 \times 7.5\% = \$2256.19$$

$$\begin{aligned} \text{Calculate Total Purchase Price} &= \$28650 + \$1432.50 + \$2256.19 \\ &= \underline{\underline{\$32338.69}} \end{aligned}$$

$$7) \text{ Calculate Property Taxes} = \frac{\$300000 \times 12.8434}{1000} = \underline{\underline{\$3853.02}}$$

$$8) \text{ Calculate This Years Property Taxes} = \frac{\$5850000 \times 6.8392}{1000} = \underline{\underline{\$40009320}}$$

$$\text{Calculate Next Years Property Taxes} = \$40009320 + \$1750000 = \$41759320$$

$$\text{Calculate Next Years Rate} = \frac{\$41759320}{\$5850000} \times 1000 = \underline{\underline{7.139345299}}$$