



Melissa works as a customs officer in Vancouver. In the year 2018 she earned a gross income of \$67 400. She paid 4% of her gross income into an RRSP, and paid union dues of \$50 per month. The union dues were a direct deduction from her salary, but the RRSP was purchased after receiving her take-home pay. She had additional deductions from her salary of \$32.40 per month.

a) Complete the steps below to determine her total income tax for the year 2018.

Step 1: Calculate Melissa's annual taxable income.

$$\begin{aligned} \text{Gross Income} &= 67\,400 & \text{Tax Exempt Deductions} &= (0.04)(67\,400) = 2\,696 \\ & & \text{(RRSP + union)} & \quad (50)(12) = 600 \\ & & & = 2\,696 + 600 = 3\,296 \end{aligned}$$

$$\begin{aligned} \text{Annual Taxable Income} &= \text{Gross Income} - \text{Tax Exempt Deductions} \\ &= 67\,400 - 3\,296 = \underline{\underline{\$64\,104}} \end{aligned}$$

Step 2: Calculate Melissa's Tax Credits.

$$\text{CPP} = (0.0495)(55\,900 - 3500) = \$2\,593.80$$

$$\text{EI Premium} = (0.0166)(51\,700) = 858.22 \quad \text{Basic Personal Amount} = 11\,809$$

$$\begin{aligned} \text{Melissa's Tax Credits} &= \text{CPP} + \text{EI Premium} + \text{Basic Personal Amount} \\ &= 2\,593.80 + 858.22 + 11\,809 \\ &= \underline{\underline{\$15\,261.02}} \end{aligned}$$

Step 3: Calculate Melissa's Federal Tax using the Federal Tax Rate Table for the year 2018.

$$\begin{aligned} \text{Federal Tax} &= 15\% \text{ of } 46\,605 \\ & \quad 20.5\% \text{ of } (64\,104 - 46\,605) \\ &= (0.15)(46\,605) + (0.205)(17\,499) \\ &= 6\,990.75 + 3\,587.30 = \underline{\underline{\$10\,578.05}} \end{aligned}$$

Step 4: Calculate Melissa's Basic Federal Tax.

$$\begin{aligned} \text{Melissa's Basic Federal Tax} &= \text{Federal Tax} - 15\% \text{ of Melissa's Tax Credits} \\ &= 10\,578.05 - (0.15)(15\,261.02) \\ &= \underline{\underline{\$8\,288.89}} \end{aligned}$$

Step 5: Calculate Melissa's Provincial Tax as 40% of her Basic Federal Tax.

$$\begin{aligned} &= (0.40)(8\,288.89) \\ &= \underline{\underline{\$3\,315.56}} \end{aligned}$$

Step 6: Calculate Melissa's total income tax. (Basic Fed Tax + Prov Tax)

$$\begin{aligned} &= 8\,288.89 + 3\,315.56 \\ &= \underline{\underline{\$11\,604.45}} \end{aligned}$$

b) Calculate Melissa's monthly take-home pay.

$$\begin{aligned} \text{Net Annual Income} &= \text{Gross Income} - [\text{CPP} + \text{EI} + \text{Income Tax} + \text{Other}] \\ &= 67\,400 - [2\,593.80 + 858.22 + 11\,604.45 + (32.40)(12)] \\ &= 67\,400 - 15\,445.27 \\ &= \frac{51\,954.73}{12} = \underline{\underline{\$4\,329.56}} \end{aligned}$$

Complete Assignment Questions #1 - #4