PSSA Open Ended Prep – Discount #2

Please read the given situation carefully. Then, answer each question that follows. If you are asked to EXPLAIN something, please do so using COMPLETE SENTENCES!

Situation:

Mrs. Wendelstein went to the store to purchase some CDs for her music collection during a “15% off” sale.

There is a clearance section that has used CDs for “buy 3, get 1 free”, but noted that these items will NOT get the 15% off deal. The price of each CD in the clearance section is $5.00.

Part A) Calculate the cost of a CD after the discount if it is originally marked at $15.90. EXPLAIN what you did and why.

\[
\begin{align*}
\text{Discount} &= \frac{15}{100} \times 15.90 \\
D &= 2.3850 \\
\text{Original Price} &= 15.90 \\
\text{Discounted Price} &= 13.51
\end{align*}
\]

I multiplied the original cost by 15% to find the discount. I then subtracted the discount from the original cost to get the new price.

Part B) Calculate the total cost of 10 CDs taken from the clearance section. EXPLAIN what you did and why.

\[
\begin{align*}
5 \quad 5 \quad \text{FREE} \\
5 \quad 5 \quad \text{FREE} \\
5 \quad \quad \quad \quad \\
+ \quad 5 \\
\hline
40
\end{align*}
\]

I listed all 10 CDs, making every 4th one be FREE. Then I added those costs to find the total.
Part C) Calculate the cost of a CD after the discount if it is
originally marked at $22.00, AND there is 6% tax added on
at the end. EXPLAIN what you did and why.

\[ \text{Discount} = \% \text{ of Original} \]
\[ D = 0.15 \times 22 \]
\[ D = 3.30 \]

\[ \text{TAX} = \% \text{ of subtotal} \]
\[ T = 0.06 \times 18.70 \]
\[ T = 1.122 \]

\[ \begin{array}{c}
22.00 \\
-3.30 \\
\hline
18.70 \\
\end{array} \]

\[ \text{pre tax!} \]
\[ 18.70 + 1.12 \]
\[ \boxed{19.82} \]

Part D) Mr. Seidel comes into the same store and purchases a
CD marked $18.00 and another CD marked $11.99. He
then gets 9 more CDs from the clearance section. After the
discounts are applied, a 6% sales tax is added to the total.
What is the final cost of Mr. Seidel’s purchase?

\[ \begin{array}{c|c}
\text{Non-Clearance} & \text{Clearance} \\
\hline
18.00 & 5 \\
+ 11.99 & 5 \\
\hline
29.99 & FREE \\
\hline
29.99 & 5 \\
- 4.50 & 5 \\
\hline
25.49 & FREE \\
\hline
\end{array} \]

\[ \begin{array}{c}
25.49 + 35.00 \\
\hline
60.49 \leftarrow \text{subtotal} \\
\end{array} \]

\[ \begin{array}{c}
60.49 \times 0.06 \\
\hline
3.6294 \leftarrow \text{tax} \\
\end{array} \]

\[ \begin{array}{c}
60.49 + 3.63 \\
\hline
64.12 \boxed{} \\
\end{array} \]