PSSA Open Ended Prep - Discount

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. Smartshopper went to the store to purchase some clothes for her children during a “20% off” end-of-summer sale.

A clerk alerted her to a clearance section that has clothes for “buy 2, get 1 free”, but noted that these items will NOT get the 20% off deal. The price of each item in the clearance section is $8.00.

Part A) Calculate the cost of a shirt after the discount if it is originally marked at $19.00. EXPLAIN what you did and why.

\[ D = 0.2 \times 19 \]
\[ D = 3.8 \]
\[ 19.00 - 3.80 = 15.20 \]

I multiplied the original cost by 20% to find the discount. Then I subtracted the discount from the original price to get the new price.

\[ \$15.20 \]

Part B) Calculate the total cost of 7 items taken from the clearance section. EXPLAIN what you did and why.

I listed the cost of the clearance items, making every 3rd one “Free”.

After listing all 7 items, I added to get the total cost.

\[ \$40.00 \]
Part C) Calculate the cost of a sweater after the discount if it is originally marked at $42.00, AND there is 6% tax added on at the end. **EXPLAIN** what you did and why.

\[
\text{Discount} = \% \text{ of Original} \\
D = .2 \times 42 \\
\quad = 8.4 \\
\text{Tax} = 20.16 \\
\quad \times .06 \\
\quad = 1.2 \\
\text{Final Price} = 33.60 \\
\quad + 8.40 \\
\quad \quad = 35.60
\]

I multiplied the original price by 20% to find the discount. I subtracted the discount from the original price to find the new price (before tax). I multiplied that total by 6% to find the sales tax. I added the sales tax to find the final price. **$35.62**

Part D) Mrs. Moneybags comes into the same store and purchases a shirt marked $21.00 and pair of jeans marked $33.00. She then gets 4 more items from the clearance section. After the discounts are applied, a 6% sales tax is added to the total. What is the final cost of Mrs. Moneybags’ purchase?

\[
\begin{align*}
21.00 & \quad + \quad 33.00 \\
\quad = 54.00 & \quad \times .2 \\
\quad = 10.8 & \quad -10.80 \\
\quad = 43.20 & \\
54.00 & \quad + \quad 43.20 \\
\quad = 97.20 & \quad \times .06 \\
\quad = 5.8320 & \\
\quad + \quad 4.03 & \quad \quad \downarrow \text{tax} \\
\quad = 71.23 & \quad \quad \downarrow \text{final}
\end{align*}
\]