Part 4: Calculation Stage for Development of the Six Month Plan

Part 4: 4-1 Seven Step Procedure for Calculating the Six Month Merchandise Plan/Budget

After the buyer completes the Preplan Stage, including the environmental scan of both the business and the domestic and global environments, and the Information Gathering Stage of analyzing numerical data from the previous year, same season, s/he is prepared to begin the final stage, or the Calculation Stage for planning the budget for the upcoming season. Based upon the information found in the previous stages, the buyer has a substantial foundation upon which to make decisions for a realistic and attainable plan.

As previously discussed, the Calculation Stage is a seven-step procedure and includes the following calculations:

1. Total Planned Sales and Total Planned Reductions
2. Monthly Distribution of Total Planned Sales
3. Monthly Distribution of Total Planned Reductions
4. Beginning of the Month (BOM) Stock for each Month
5. Ending of the Month (EOM) Stock for each Month
6. Planned Purchases at Retail for each Month
7. Open-to-Buy (OTB) or Planned Purchases at Cost

In this segment, each of the components of The Six Month Merchandise Plan/Budget will be calculated for the Spring/Summer six months. The plan will be based upon the actual previous fashion department plan analyzed in Part 3: 3-1 Numerical Data for Existing Store. (Please refer to, review, and copy the schematic of the “Six Month Merchandise Budget/Plan for Spring Season – Fashion Department.”) Note that these plans can be calculated in Excel and are usually completed by computer in most retail organizations.

1. Calculate Total Planned Sales and Total Planned Reductions.

Total Planned Sales

All Six Month Merchandise Plans/Budgets begin with estimating achievable total planned sales. As previously stated, an existing plan is the basis for the planned merchandise budget in this segment; however, for some of the steps, alternative methods are explored in order to present the reader with other industry methods.

Two industry methods are commonly utilized to calculate planned sales dollars. These methods are the a) Sales per Square Foot Method for a new business and b) Percent of Increase (Decrease) for an existing business. Other methods not addressed in this explanation include the Cost Plus Method and Market Study Method. These methods are used infrequently and may be researched for further information for uses and calculations.

Sales per Square Foot Method for New Business

If the store is a new retail establishment, the retailer must estimate the annual retail sales volume. One of the best methods for calculating planned sales for a new business is the Sales per Square Foot method where the sales volume is determined by the square feet of selling space in the physical retail store.
The Sales per Square Foot method is usually based on statistical averages provided by retail organizations, financial institutions, or business services. The buyer must adapt those national averages to the new store image, geographical area, target consumer demands, and the product classifications.

If this method is utilized for an existing department or store, the buyer may calculate the sales per square foot for the previous year for the department. The following formulas are utilized for calculating sales per square foot and planned sales when using the Sales per Square Foot method.

\[
\text{Sales $ Per Square Feet} = \frac{\text{Annual Sales $}}{\# \text{ Square Feet}}
\]

\[
\text{Planned Sales $} = \# \text{ Square Feet} \times \text{Sales $ per Square Foot}
\]

For example, if a small specialty store or a department has a retail selling space of 2400 square feet and the retailer plans to sell annually at least $250.00 per square foot, the planned sales dollars for the retail year is calculated as follows:

**Example:** Calculate planned sales $

\[
\begin{align*}
\text{Planned Sales $} &= ? \\
\# \text{ Square Feet} &= 2400 \\
\text{Sales $ per Square Foot} &= $250.00 \\
\text{Planned Sales $} &= \# \text{ Square Feet} \times \text{Sales $ per Square Foot} \\
&= 2400 \text{ sq. ft.} \times $250.00 \\
&= $600,000.00
\end{align*}
\]

The square feet included in the formula are the square feet only for the selling floor, not the stockroom, receiving areas, restrooms, or storage areas. Sales per square feet vary with store type, product classifications and types, and the retailer’s pricing strategies. For example, a large chair takes much more space to house and display than does a diamond ring or a handbag. Therefore, the jewelry or handbags have a much higher sale per square foot dollar amount than the larger chair that takes up much more space.

Additionally, sales per square feet are calculated for annual sales. Thus, the buyer must determine the amount of sales volume for the first six month period and the second six month period. As previously explained, most retailers realize between 40 % to 45 % of their annual sales in the Spring Six Month period and 55 % to 60 % in the Fall Six Month period.

**Percent of Increase (Decrease) for Existing Business**

The method for calculating planned sales for fashion departments and the majority of retail stores is the existing business formula. For an established business, the retailer more than likely uses the following formula to calculate the planned sales for the season.

\[
\text{Planned Sales $} = \text{Base Year Sales $} + (\text{Base Year Sales $} \times \text{Increase %})
\]

Or

\[
\text{Planned Sales $} = \text{Base Year Sales $} - (\text{Base Year Sales $} \times \text{Decrease %})
\]
After critically examining the total sales for the same season of the previous year, reviewing the economic climate in the current marketplace, as well as the most recent trends in retail sales, and any noticeable changes in the target consumer and/or store traffic, the buyer must decide upon the percent for increase of sales that is feasible to set as the planned sales goal, or the buyer must determine the percentage that the sales should be decreased due to adverse circumstances.

Usually, the buyer plans for an increase in sales, especially if the economic conditions are favorable and the consumer mindset and spending patterns are positive. The amount of the increase usually varies with the store type, product classification, price range of merchandise, and even geographical region of the country. Thus, the amount of the percentage increase should be based on the previous sales patterns of the fashion department, the national average of percentage of the sales increase for the store type and product type and the future economic outlook and consumer buying patterns.

It is very unusual for a buyer to plan a decrease in sales unless some of the following situations exist: the store management is eliminating some of the selling space in the buyer’s department, vendors are being eliminated from the department, or the department is being renovated or downsized in some manner. Some stores calculate sales per square foot for all departments. Then those departments that are doing well are rewarded with more selling space which must be taken from the departments with weaker sales. Consequently, the buyer must adjust accordingly to the floor space and economic situation.

In summary, the buyer must decide if the sales will remain stagnant, increase a specific percent over the same season of the previous year, or if the sales will decrease from last year’s sales due to both external and/or internal factors. The amounts of increase or decrease do not have to be the same percent amount for the first six month period and the second six month period. Remember, the buyer is analyzing each six month period based upon factors that impact that particular time period or same season.

For the planned merchandise budget for the fashion department analyzed in Part 3: 3-1, after consulting with management, the buyer has decided to plan for an increase in sales of 15.00 % over the previous year, same season. However, if conditions are not favorable for such an increase, the buyer, along with management consultation, must make a judgment decision regarding the amount of increase to be utilized for calculating the planned sales for the six month season. (Note: In this example, the 15 % increase is an arbitrary number and is used only in order that the reader may easily and clearly observe the differentiation in the dollar amounts between the figures for the “Spring Season – Previous Year Actual Merchandise Budget/Plan” of this section and the dollar figures for the “Spring Season – Planned Merchandise Budget/Plan” of this part.)

The following calculations detail the total planned sales for the planned Spring Merchandise Plan.

\[
\text{Planned Sales} = \text{Base Year Sales} + (\text{Base Year Sales} \times \text{Increase \%}) \\
= \$225.00 + (\$225.00 \times 15.00 \% \times 0.15) \\
= \$258.75 \\
= \$259.00
\]

(For this plan, figures are rounded according to financial notations.)

Total Planned Reductions
Next, the total planned reductions for the Six Month Plan must be calculated. Remember, that from the previous analysis, the markdowns for the spring season the previous year were 22% of total sales, and that those markdowns were a 2% increase from the previous year (Refer to Part 3: 3-1). From the analysis, it appears to the buyer that high markdowns have become a problem for the department. Therefore, after investigating the problem areas for the department and reviewing the environmental scan, the buyer has decided to attempt to reduce the markdowns by 3%.

For the novice, please note that increasing or lowering percentages on the Six Month Plan is very difficult, yet critical for a realistic plan. Therefore, caution must be used when making the "educated judgment" decisions with regards to increases and decreases in actual figures. Figures are not built on good intentions and instinct. Rather, they are built on actual happenings in the department or store.

Based on total planned sales of $259.00, the following formula is used to calculate the total planned reductions.

\[
\text{Total Planned Reduction } $ = \text{Total Planned Sales } $ \times \text{Total Planned Reduction } \%
\]

As previously explained, since markdowns increased from 20% to 22% for the previous year, the same season, the buyer decided to attempt to reduce the amount of markdowns by 3% or from 22% to 19% (i.e., 22% - 3% = 19%).

The following calculation provides the dollar amount for the plan.

\[
\text{Total Planned Reduction } $ = \text{Total Planned Sales } $ \times \text{Total Planned Reduction } \%
= $259.00 \times 19.00 \% (.19) \\
= $49.21
\]

Note that the reduction dollar amount is almost the same amount as the previous year for the same season; however, the percentage of 19% is calculated for the $259.00, while the actual previous year’s sales were $225.00 with a 22.00% markdown percent for the actual season. However, the percentage amount has been reduced 3.00%.

For the purposes of this Six Month Budget, reductions are markdowns; but remember that some retailers include markdowns and shrinkage, either separately or in combination for the reduction percentage.

2. Calculate Monthly Distribution of Total Planned Sales.

The total sales volume dollars must be divided into monthly increments and allocated across the months within the six month plan. As discussed earlier, sales volumes vary from month to month, from season to season, and from year to year; from geographic region to geographic region, from store to store, and from product category to product category.

For the established retailer, these monthly increments can be calculated as percentages of the total sales volume for the same season of the previous year and then adjusted to fit the planned allocations. (Refer to the schematic of the “Six Month Merchandise Budget/Plan for Spring Season – Fashion Department.”)
Review the sales volume by month and look for the peaks and valleys of sales during the actual six month period. Then, using information from the environmental scan; the analysis of the numerical data from the same season, the previous year; and the months with major holiday seasons plus predicted weather conditions for the upcoming season, determine the percentage of total sales that will be sold for each month. Remember that the total of the monthly percentages must equal to 100 % and that the dollar amounts must equal the total planned sales figure.

The formula for calculating the monthly planned sales is as follows:

\[
\text{Monthly Planned Sales} = \text{Total Planned Sales} \times \text{Monthly Sales} \%
\]

For example, for the month of February, the buyer has set a goal of selling at least 13.16 % of total sales for that particular month. (Refer to schematic below.) The following calculation provides the dollar amount for February.

\[
\text{Monthly Planned Sales} = \text{Total Planned Sales} \times \text{Monthly Sales} \%
\]
\[
= \$259.00 \times 13.16\% (.1316) 
\]
\[
= \$34.08
\]

Using the above formula and monthly percentages provided on the schematic below for the upcoming season, calculate the monthly planned sales for the upcoming six month plan and place them in the appropriate row on the schematic. (Refer to Part 4: 4-1A of this section for a review of all Six Month Merchandise Plan/Budget answers.)

### Six Month Merchandise Budget/Plan for Spring Season – Fashion Department

<table>
<thead>
<tr>
<th>Month</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
<th>MAY</th>
<th>JUNE</th>
<th>JULY</th>
<th>SEASON</th>
<th>AUGUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory (BOM)</td>
<td>$185.05</td>
<td>$186.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$210.85</td>
<td></td>
</tr>
<tr>
<td>Sales %</td>
<td>13.16%</td>
<td>17.23%</td>
<td>15.77%</td>
<td>17.05%</td>
<td>18.95%</td>
<td>17.84%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>Sales $</td>
<td>$34.08</td>
<td>$44.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$259.00</td>
<td></td>
</tr>
<tr>
<td>Purchase %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase $</td>
<td>$40.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction %</td>
<td>2.20%</td>
<td>2.00%</td>
<td>2.10%</td>
<td>3.90%</td>
<td>5.00%</td>
<td>3.80%</td>
<td>19.00%</td>
<td></td>
</tr>
<tr>
<td>Reduction $</td>
<td>$5.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>49.21</td>
<td></td>
</tr>
<tr>
<td>*(EOM)</td>
<td>$186.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S/S Ratio</td>
<td>5.43</td>
<td>4.17</td>
<td>5.19</td>
<td>4.95</td>
<td>4.03</td>
<td>4.83</td>
<td>4.75</td>
<td></td>
</tr>
</tbody>
</table>
Based on the previous analysis of the actual plan, remember that the Spring or Easter Holidays were at the end of March and that the month of May had less sales than February, which is atypical. The Easter Holiday for the upcoming season is also in March. (Refer to Part 3: 3-1) Further, note that the buyer is attempting to increase sales in May and June, and more than likely planning to reduce markdowns in July. (Refer to Part 3: 3-1) In other words, the timing and the amount of the markdown are the key to controlling markdowns and more than likely increasing sales volume and profit.

3. **Calculate Monthly Distribution of Total Planned Reductions.**

The markdown dollars must be distributed across the six month period and allocated to each month based upon the merchandising activities needed for the month to reach the projected sales goals. Remember that the total monthly reduction percentages (i.e., February – July percentages) are equal to the total reduction percentage amount for the six month period.

For example, the buyer has decided to plan for a 19.00 % reduction for the six month period. Therefore, if using the 19.00 % as the total percentage, the percentages for all of the six months must not be cumulatively more than 19.00 %. Thus, increments of the 19.00 % are allocated to each month of the six month plan and then the dollar amounts calculated for each month. (Refer to the schematic for the Six Month Merchandise Plan, page 36.)

The following calculation is an example for the month of February. The buyer planned for February to be 2.20 % of the total 19.00 % markdown. However, the dollar amount is calculated based on the relationship of the percentage to the total planned sales dollars.

\[
\text{Monthly Planned Reduction } \$ = \text{Total Planned Sales } \$ \times \text{Monthly Reduction } \% \\
= \$259.00 \times 2.20 \% \times 0.0220 \\
= \$5.70
\]

Using the above formula and monthly percentages provided on the schematic for the upcoming season, calculate the monthly planned reductions for the upcoming six month plan and place them in the appropriate row on the schematic. (Refer to Part 4: 4-1A of this section for a review of all Six Month Merchandise Plan/Budget answers)

4. **Calculate Beginning of the Month (BOM) for Each Month.**

Several industry methods are utilized to calculate stock levels. As previously discussed, the stock levels are related to the sales volume for the month and turnover for the period. The methods commonly used for calculating stock levels are the Basic Stock Method and the Stock/Sales Ratio Method. Another method, Percent Variation Method, is based on the concept that the BOM stock level is a percentage of the average inventory. It does not require a basic amount of stock to be maintained in the inventory and fluctuates with planned monthly sales.

Other methods not addressed in this explanation for calculating stock levels include Weeks-of-Supply Method and Periodic Replenishment Staple Merchandise Method. Note that the Weeks-of-Supply Method is utilized for stock that sells quickly and needs to be replenished frequently. The Periodic Replenishment Method is used for staple merchandise that is continually stocked throughout the year.
These methods usually are utilized for fashion basic, basic or staple merchandise and may be researched for further information for uses and calculations.

**Percent Variation Method**

The **Percent Variation Method** takes into consideration the variation in monthly planned sales and produces a greater dollar range between the highest and lowest BOM than the BOM range found when using the basic stock method to calculate BOM. The basic stock method is less complicated to calculate than the percent variation method and is used more frequently in industry. The formula for calculating the percent variation method is explained below.

\[
\text{BOM Stock} \; $ = \text{Average Stock} \; $ \text{ for Period} \times 0.5 \times (1 + \text{Sales for Month} \div \text{Average Monthly Sales} \; $)
\]

The following calculation is an example of calculating the BOM stock for the month of February using the Percent Variation Method. (Refer to figures on the *Six Month Merchandise Budget/Plan for Spring Season – Fashion Department*.)

**Example:** Calculate, using the Percent Variation Method, the BOM $ for February

\[
\text{Average Stock} \; $ = 7 \; \text{BOM} \; $ \div 7
\]
\[
= (\$185.05 + \$186.11 + \$211.96 + \$218.59 + \$197.79 + \$223.19 + \$210.85) \div 7
\]
\[
= \$1,433.54 \div 7
\]
\[
= \$204.79
\]

Sales $ February = $34.08

\[
\text{Average Monthly Sales} \; $ = 6 \; \text{Monthly Sales} \; $ \div 6 \text{ (if calculating for six month period)}
\]
\[
= (\$34.08 + \$44.63 + \$40.84 + \$44.16 + \$49.08 + \$46.21) \div 6
\]
\[
= \$259.00 \div 6
\]
\[
= \$43.17
\]

\[
\text{BOM Stock} \; $ = \text{Average Stock} \; $ \text{ for Period} \times 0.5 \times (1 + \text{Sales for Month} \div \text{Average Monthly Sales} \; $)
\]
\[
= \$204.79 \times 0.5 \times (1 + \$34.08 \div \$43.17)
\]
\[
= \$204.79 \times 0.5 \times (1 + .79)
\]
\[
= \$204.79 \times .90 \text{ (rounded from 0.5 x 1.79 or .895)}
\]
\[
= \$184.31
\]

**Basic Stock Method**

The **Basic Stock Method** maintains a specific stock level of merchandise throughout the period; however, it also takes into account the amount of sales for the month. Therefore, this method assures the retailer that merchandise should always be in stock, without stockouts or odd lots and broken sizes. This method is used for basic and fashion basic items that should always be available for consumer selection. For example, the basic stock method might be used for calculating the BOM inventory for the store’s most popular selling sizes in men’s white underwear or work wear denim jeans.

The formulas for calculating basic stock are as follows:

\[
\text{Basic Stock} \; $ = \text{Average Stock} \; $ - \text{Average Monthly Sales} \; $
\]
Average Stock $ (Six Months) = 7 BOM $ ÷ 7

OR

Average Stock $ (Six Months) = BOM $ for each month (6) + End of Period Stock ÷ 7

Average Monthly Sales $ = 6 Monthly Sales $ ÷ 6 (if calculating for six month period)

BOM $ = Basic Stock $ + Planned Monthly Sales $

The following calculation is an example of calculating the BOM stock for the month of February using the Basic Stock Method. (Refer to figures on the Six Month Merchandise Budget/Plan for Spring Season – Fashion Department.)

Example: Calculate, using the Basic Stock Method, the BOM $ for February

Average Stock $ = 7 BOM $ ÷ 7
= ($185.05 + $186.11 + $211.96 + $218.59 + $197.79 + $223.19 + $210.85) ÷ 7
= $1,433.54 ÷ 7
= $204.79

Average Monthly Sales $ = 6 Monthly Sales $ ÷ 6 (if calculating for six month period)
= ($34.08 +$44.63 + $40.84 + $44.16 + $49.08 + $46.21) ÷ 6
= $259.00 ÷ 6
= $43.17

Basic Stock $ = Average Stock $ - Average Monthly Sales $
= $204.79 - $43.17
= $161.62

Sales $ February = $34.08

BOM $ = Basic Stock $ + Planned Monthly Sales $
= $161.62 + $34.08
= $195.70

Basic stock can be calculated for quarters, six month or annual periods. It is usually set up on computer and the buyer monitors the stock levels to assure that the method is successful.

Stock/Sales Ratio Method
As previously discussed, the Stock/Sales Ratio method relates the amount of stock needed for the month to meet the planned sales goal for the same month. Expressed as a ratio, it is the number of dollars it takes to sell one dollar worth of merchandise. The stock/sales ratio is analyzed in the information stage and is adjusted in relation to sales adjustments for the same month.

Stock/Sales ratios vary from store type to store type, department to department, product classification to product classification, year to year, season to season and month to month. Therefore, the buyer must constantly adjust the ratios to attempt to create inventory levels needed in order to reach the planned sales. By examining previous budgets and/or researching national stock/sales ratio averages, the buyer
has information to make an educated judgment decision on what ratios will be most workable for creating a successful budget.

As explained in the previous Part 3: 3-1, the two formulas needed for calculating the BOM utilizing the Stock/Sales Ratio Method are as follows:

\[ \text{Stock/Sales Ratio} = \frac{\text{Monthly BOM Inventory $}}{\text{Monthly Sales $}} \]

If the buyer has records of previous monthly stock/sales ratios and has planned the monthly sales amounts, s/he can calculate the BOM for each month, using the formula below.

\[ \text{BOM Inventory $} = \text{Planned Monthly Sales $} \times \text{Monthly Stock/Sales Ratio} \]

For example, for the month of February, the buyer has planned sales of $34.08 and has determined that the stock/sales ratio should be 5.43 for February. (Refer to figures on the Six Month Merchandise Budget/Plan for Spring Season – Fashion Department)

The following calculations will provide the BOM for the month of February using the Stock/Sales Ratio Method.

\[ \begin{align*}
\text{BOM Inventory $} &= \text{Monthly Sales $} \times \text{Planned Monthly Stock/Sales Ratio} \\
&= 34.08 \times 5.43 \\
&= 185.05
\end{align*} \]

Using the above formula and the monthly stock/sales ratios provided on the schematic, plus the planned sales calculated for the plan, calculate the monthly planned BOMs for the upcoming six month plan and place the values in the appropriate row on the schematic. (Refer to Part 4: 4-1A of this section for a review of all Six Month Merchandise Plan/Budget answers)

5. **Calculate End of the Month (EOM) for Each Month.**

The end-of-the-month stock (EOM) is the same stock as the beginning-of-the-month stock for the beginning of the next month. For example, the end-of-the-month stock (EOM) for February ($186.11) is the same inventory or stock level as the beginning-of-the-month (BOM) for March ($186.11). (Refer to the schematic for the planned budget, page 44.) In order to calculate the EOM for July, the buyer must know the planned sales and the stock/sales ratio for August. (These figures must be estimated based on the first month (i.e., August) of the next six month plan; or in this case, the fall merchandise plan.) Then the EOM for the month of July can be calculated.

When the planned Six Month Merchandise Budget becomes the working plan for the store, the buyer compares the monthly planned figures to actual happenings in the store. On the schematic, there are rows for recording both the planned sales, reductions, and purchases and the actual sales, reductions, and purchases achieved. (Refer to Part 4: 4-1B of this section to review the form or schematic for recording actual figures and making comparisons between the plan and the actual achieved figures of all Six Month Merchandise Plan/Budget answers) With this information, the buyer may calculate the achieved EOM for the month using the formula below.

\[ \text{Achieved EOM $} = \text{BOM $} - \text{Monthly Sales $} - \text{Monthly Reduction $} + \text{Purchases $} \]
From these calculations, the buyer can track problem areas and make adjustments in order to meet plan later in the six month period. For example, if the sales goal is not met for one month, then the stock level for the next month will not meet plan. If there is too much inventory, then the buyer will have to use his or her best judgment in order to make decisions with regard to reductions and/or cancellation of orders. However, the vendor often has the orders ready to ship and refuses to honor the cancellation. Then the buyer must plan for special events or promotions in order to create more store traffic or impulse buys to increase sales.

6. Calculate Planned Purchases at Retail for Each Month.

Planned purchases are paramount to meeting the planned sales for the month. Remember, the stock must be in the store before the peak selling season; stock should also be received in the store throughout the selling season. Thus, the buyer must carefully plan deliveries and quantities of units needed to meet the planned sales.

Planned purchases are based on the stock on-hand, planned sales, planned reductions that must be taken in order to meet the sales plan, and EOM stock that is needed at the end of the month so that sales can be met at the beginning of the next month.

The following formula is used for calculating planned purchases:

\[
\text{Planned Purchase}\$ = \text{Planned Sales}\$ + \text{Planned Reduction}\$ + \text{EOM}\$ - \text{BOM}\$
\]

For example, the purchases for the month of February are calculated as follows:

\[
\text{Planned Purchase}\$ = \text{Planned Sales}\$ + \text{Planned Reduction}\$ + \text{EOM}\$ - \text{BOM}\$
= $34.08 + $5.70 + $186.11 - $185.05
= $40.84
\]

Using the above formula and the planned monthly sales, planned monthly reductions and planned monthly EOM $ minus the planned monthly BOM $ for each month, calculate the planned monthly purchases for the upcoming six month plan and place the values in the appropriate row on the schematic. (Refer to Part 4: 4-1A of this section for a review of all Six Month Merchandise Plan/Budget answers)

7. Calculate Open-to-Buy or Planned Purchases at Cost.

The budget that the buyer takes to market must be calculated at wholesale cost for each month, since the purchases are stated in retail dollars. Therefore, the buyer must determine the initial markup percent or use the initial markup percent established by management in order to make the calculations.

Utilizing the cost formula from Section 1: Part 2: 2-1 and the initial markup percent of 52.95 % for the computation of the OTB, the month of February is calculated below.

\[
\text{OTB Cost}\$ = \text{Planned Purchase}\$ \times \text{Cost of Goods Sold}\%
= \$40.84 \times (100.00\% - 52.95\%)
= \$40.84 \times 47.05\% (.4705)
\]
Using the above formula and the monthly planned purchases at retail, calculate the monthly planned purchases (OTB) at cost for the upcoming six month plan. Many retailers do not record these figures on the actual Six Month Merchandise Plan/Budget but have a separate form so that the monthly open-to-buy (OTB) is a continuous calculation of actual happenings. However, for ease of reviewing, a line has been added to the form in this part so that the reader may examine the OTB Cost dollars for each month. (Refer to Part 4: 4-1A of this section for a review of all Six Month Merchandise Plan/Budget answers)

In summary, The Six Month Merchandise Plan/Budget is a guide that is used by the buyer in order to attempt to operate a profitable business. The plan relates the sales volume to the stock levels, provides a guideline for markdowns, and denotes the planned purchases needed for the plan to work. However, when plans are put into action, the actual happenings in the department never match precisely the planned goals.

The monthly actual figures can be recorded and compared to the planned calculations in order for the buyer to make adjustments to the plan for a smoothly running operation. The plan not only assists the buyer in making “educated decisions” about corrections and actions for future months; but also it alerts management to the amount of capital needed for the season, and merchandising policies that are useful or those that need to be reevaluated due to ineffectiveness. The reader may view the calculations for the entire Spring Six Month Merchandise Plan/Budget for this Part in Part 4: 4-1A

### Part 4: Calculation Stage for Development of the Six Month Plan

**Part 4: 4-1 A Seven Step Procedure for Calculating the Six Month Merchandise Plan/Budget**

For the reader’s review, the Spring Six Month Merchandise Plan for the Fashion Department is calculated below.

<table>
<thead>
<tr>
<th>Month</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
<th>MAY</th>
<th>JUNE</th>
<th>JULY</th>
<th>SEASON</th>
<th>AUGUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory (BOM)</td>
<td>$185.05</td>
<td>$186.11</td>
<td>$211.96</td>
<td>$218.59</td>
<td>$197.79</td>
<td>$223.19</td>
<td>$204.79</td>
<td>$210.85</td>
</tr>
</tbody>
</table>

| Sales %  | 13.16%   | 17.23%  | 15.77%  | 17.05%  | 18.95%  | 17.84%  | 100.00%|
| Sales $  | $34.08   | $44.63  | $40.84  | $44.16  | $49.08  | $46.21  | $259.00| $44.39 |

| Purchase % | 12.23% | 22.65% | 15.84% | 10.02% | *26.17% | 13.09% | 100.00%|
| Purchase $  | $40.84 | $75.66 | $52.91 | $33.46 | $87.43  | $43.71  | $334.01|
**Part 4: Calculation Stage for Development of the Six Month Plan**

*Part 4: 4-1 B Seven Step Procedure for Calculating the Six Month Merchandise Plan/Budget*

For the reader’s review, the Spring Six Month Merchandise Plan for the Fashion Department schematic for the working plan for recording percents and dollars for both planned and actual sales, purchases, and reductions, plus BOMs, EOMs, and stock/sales ratios figures is presented on the following page.

**Six Month Merchandise Budget/Plan for Spring Season – Fashion Department**

<table>
<thead>
<tr>
<th>Season: Spring</th>
<th>Year: Spring Six Month Merchandise Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>FEBRUARY</td>
</tr>
<tr>
<td>BOM $ Plan</td>
<td></td>
</tr>
<tr>
<td>BOM $ Actual</td>
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<tr>
<td>Sales % Plan</td>
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<tr>
<td>Sales % Actual</td>
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<tr>
<td>Sales $ Plan</td>
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<tr>
<td>Sales $</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td>Purchase % Plan</td>
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<tr>
<td>--------</td>
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