Case A22: Pricing Problems

Answers to Problems:

1. The cost of a new CD album is $8.75. The buyer plans to make an initial markup up of 25% on the retail price. What should the retail price be?

   Retail price = cost + retail price * markup on retail

   Retail price = cost/(1 - markup on retail) = $8.75/(1 - .25) = $11.67

2. The initial selling price for a blouse is $25. The cost was $14. What was the initial markup on retail?

   Markup on retail = (retail price - cost)/retail price = (25 - 14)/25 = 44%

3. A belt was originally priced a $17 and put on sale for $12. What was the markdown percentage on retail?

   Markdown % = (retail price - sale price)/retail price = (17 - 12)/17 = 29.4%

4. The cost of bicycle is $200. The initial markup on retail is 40%. After offering the bicycle at the initial selling price, the bicycle was markdown by 20% and it sold at that price?

   a. What was the final selling price for the bicycle?

      Initial selling price = 200/(1 - .40) = $333

      Final selling price = 333 - 333*.20 = $267

   b. What was the maintained markup?

      Maintained markup = (final selling price - cost)/final selling price = (267 - 200)/267 = 25.1%
5. A woman's dress suit was originally priced at $250. The first markdown was 20% on retail and the second markdown was an addition 30%. What is the selling price of the suit after the second markdown?

Selling price after first markdown = $250 – ($250 * .20) = $200

Selling price after second markdown = $200 – ($200 * .30) = $140

or $250 * (1−.20) * (1−.30) = $140

6. A buyer for men's ties wants to have a maintained markup of 40%. The buyer forecasts that the reduction as a percent of sales will be 13%.

   a. What should the initial markup be?

      Initial markup = Maintained markup + Reductions
      Net sales + Reductions

      46.9% = (40 + 13) / (100 + 13)

   b. In the above example, if the cost of the ties is $12, what would be the initial selling price?

      Initial selling price = 12/(1−.469) = $22.64

7. A buyer orders 500 cotton sweaters at a cost of $20 per sweater.

The steps in the problem illustrate the logic for solving problems of this type

   a. What is the cost for all of sweater when they are sold?

      500 * $20 = $10,000

   b. If the buyers wants to have a maintain markup of 50%, what is the total sales dollars that must be generated by the sale of all 500 sweaters?

      Initial sale price for each sweater = $20/(1−.50) = $40.00

      Total sales revenue that must be generated from selling 500 sweaters to generate a 50% maintain markup = $40 * 500 = $20,000

   c. The buyer sets the initial selling price for the sweaters at $45. 200 sweaters are sold at that price. How many sales dollars were generated by the sales of the initial 200 sweaters?

      Sales revenue generated from first 200 sweater = $45 * 200 = $9,000

   d. How many sales dollars must be generated by the remaining 300 sales to achieve a maintained markup of 50%?

      $20,000 – $9,000 = $11,000
e. Sales of the sweaters are slowing and thus the buyer is going to mark them down. What does he need to sell each of the remaining 300 sweaters at to realize a 50% maintained markup?

Sale price to generate $11,000 from final 300 sweaters = $11,000/300 = $36.67

f. How much of a markdown on retail can the buyer take to realize a 50% maintained markup on the sales of all 500 sweaters?

(initial selling price - markdown price)/initial selling price = ($45 - 36.67)/$45 = 18.5%

8. A buyer for women hosiery is planning to buy merchandise to be sold during the summer season that will generate retail sales of $150,000. The buyer wants to have a maintained markup of 34% on retail for summer hosiery sales. Reductions will be very small and can be ignored. The buyer has already spent $53,250 for merchandise that will generate $75,450 at retail. What markup does the buyer need to have on the remainder of the planned purchases to realize the overall markup of 34%?

The buyer's goal is to generate $150,000 in sales and realize a total gross margin of $150,000 * .34 = $51,000.

At this point the buyer has generated $75,450 sales and thus needs to generate $150,000 - 75,450 = $74,550.

The buyer has generated $75,480 - 53,250 = $22,230 in gross margin. So the buyer needs to generate another $51,000 - 22,230 = $28,770 in gross margin on sales of $74,450.

Thus the markup on the remaining sales to be made must be $28,770/74,450 = 38.64%.

9. A buyer has purchased 100 handbags at $18 each. Some of the handbags will be sold at $28 retail and others will be sold at $36 retail. How many handbags should be put at each price point to realize a maintained markup of 40% assuming no reductions?

To generate a maintained markup of 40%, the buyer needs to have an average retail of $30.

Retail = Cost + Markup, or \( R = 18 + .4R \)

\[ R = 30 \]

So, he will have to generate $3000 to generate the 40% maintain markup ($30 X 100 bags)

Let \( x \) = number of handbags sold at $28

Then 100 - \( x \) = number of handbags sold at $36

Total sales = $3,000 = $28X + $36(100 - X)

\( X = 75 \) = number of handbags sold at $28
10. A retailer is considering the development of a collection of private label men's ties. The ties which will retail for $65.00 each will incur an expense to the retailer which include $15,000 in fixed costs and $19.50 in variable costs. What is the Break-even point for the retailer expressed in both units, and dollars.

Breakeven sales = fixed cost/(selling price – variable cost) = 15,000/(65 – 19.50) = 330
Case A21: Stan’s Shirts

Discussion Questions:

1. What is the unit contribution for the T-shirts?

<table>
<thead>
<tr>
<th>Costs</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable:</td>
<td></td>
</tr>
<tr>
<td>T-shirt</td>
<td>$4.00/ea</td>
</tr>
<tr>
<td>Decal</td>
<td>.50</td>
</tr>
<tr>
<td>Wastage (2% of 4.50)</td>
<td>.09</td>
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<tr>
<td>Fixed:</td>
<td></td>
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<tr>
<td>Lease</td>
<td>$1400/mo</td>
</tr>
<tr>
<td>Embossers ($2400/12)</td>
<td>200</td>
</tr>
<tr>
<td>Fixtures ($1440/24)</td>
<td>60</td>
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<tr>
<td>Telephone, etc.</td>
<td>125</td>
</tr>
<tr>
<td>Advtg</td>
<td>200</td>
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<tr>
<td>Wages (1040 + 1300)</td>
<td>2340</td>
</tr>
<tr>
<td>Total fixed</td>
<td>$4325</td>
</tr>
</tbody>
</table>

   Unit contribution = Price - Variable costs = $10 - 4.59 = $5.41

2. What is Stan’s monthly break-even point?

   \[ \text{Break-even} = \frac{4325}{5.41} = 799.44 \text{ shirts/month} \]

   Unit cost $5.41

3. What market share does he need to break even?

   \[ \text{Market share to break even} = \frac{799}{833} = 0.96\% \]

   MKI size 100,000/12

4. What is his monthly profit?

   Monthly profit = (Monthly volume - Break-even volume) x (Unit Contribution)

   \[ = [(1,000,000 \times 12\%) - 799] \times 5.41 = 1,087.19 \]
5. Because of some new fashion announcements he has just received, Stan expects T-shirt sales in his area to increase to about $144,000 next year. He's considering raising his advertising budget by $800 per month.

a. If the advertising budget is raised, how many T-shirts must he sell to break even?

New break-even = $4,325 + $800 = 947.3

$5.41

b. How many T-shirts must he sell per month to get the same profit as this year?

Number of shirts for same profit: (x-947.3) x $5.41 = $1,087.19
$5.41x - 5124.9 = $1,087.19
$5.41 = $6,212.09
X = 1,148.3

c. What must his market share be next year to get the same profit as this year?

New share = 1,148.3 = 13.8%

8,333

d. What must his market share be for him to have a monthly profit of $3,000?

Share for $3000 profit: 4,325 + 800 + 3,000 = 1,501.85 shirts

$5.41