3 Step Simplified Formula for Successful Business Start-Up

by Arnold R. Jaffa

Costing-Pricing Your Product
Determining Sales Required for Break-Even
Determining Cash Required for Start-Up
Determining Purchase Price of a Business
# 3-Step Simplified Formula for Successful Business Start-Up

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Foreword

The following is based on my experiences of counseling many hundreds of people on a one to one basis. For the most part they did not have the foggiest idea where to start in their attempt to establish themselves in business. Have you decided that your idea can become a marketable product? The 3 Step Formula that I developed will help you determine what your needs are to be successful in establishing yourself in business and making your dreams come true.

If you can do addition, subtraction, multiplication and division, you are already equipped to proceed with what is ahead. Although we live in the computer age you don’t need one to be a successful startup. Some people think that a computer is a money making machine they can’t do without, but that is not true. It’s only a labor saving device and becomes a useful tool after you are established and experienced in your business for some time. The exception to this, of course, would be businesses that use computers to generate the product.

The 3 Step Formula will also help in developing your business plan which simply is the road map for reaching your goal. Your business plan should be revised as often as needed as you progress from infancy to maturity in your newly established business. As you gain knowledge, experience and wisdom, you will be rewarded based on your applied effort. The Primer stating my one liners at the end of this book, is an outgrowth of my own business experiences and should help you to succeed more quickly.

I would like to thank my daughter Audrey and my son-in-law Jeff, for helping me when I added the third step and final text for completing this project in its entirety. Thank you to my wife Doris who stood beside me all through the years while I made the intensive effort to stay in business and succeed. I thank my three children Gene, William, and Audrey to whom I was largely unavailable during the years that I spent building up my business. Thank you to James Barrett, Deborah Lima, and Brianna Svelmoe for helping with typographical changes.

Since August 1982 I have volunteered to counsel people on a one to one basis through SCORE, Counselors to America’s Small Business, a resource partner with the U.S. Small Business Administration. During the time spent counseling these people I have been inspired more than ever to help promote self-employment and private enterprise which lead to employment opportunities for others as well. My motto is “When someone fails we all lose, when someone succeeds we all benefit.”

I wish you good health and good luck in your endeavors to succeed in business.
We start with an idea and follow through until it develops into a marketable product. The **Costing/Pricing** formula provides the profit per unit and selling price per unit based on a given profit margin percentile. The profit and selling price per unit is applied in the **Break-Even** formula which in turn provides unit sales and required sales revenue to reach Break-even.

We begin with just gathering the cost numbers for your product and then proceed to apply the information in the costing/pricing formula (see example pgs. 29-31).

After you are experienced in your business you can apply a second method for costing/pricing using a factor (see examples pgs. 33-34). A third method for costing/pricing is based on beginning with a suggested selling price and a given profit margin percentile. The result is the Limit of Cost (see example page 16). In review, all of the costing/pricing methods will determine profit per unit in dollars or cents enabling you to apply the result in the Break-even formula.

Part of the expense requirements is the provision for loan pay-back or capital infusion. Lending your own funds to start up a business is the same as borrowing money from a lending institution, thus provision for repayment should be established for the loan. Your local lending officer can provide the loan repayment amounts for any term based on current interest rates. This pay-back to yourself or to the lender is another item that should be added in when figuring your Break-even as part of the \((A + B + C)\) on page 32. A pay-back for investment is one of the required criteria for any business. If the loan cannot be paid back in a timely manner, it means that you are eating up money and the business may not be a viable or worthwhile venture.

On pages 36-37, I have illustrated reserve amounts in anticipation for slow paying accounts or lack of sales due to seasonal factors for any given period which will slow down receivables. The illustration is for 1 month - 2 months - 3 months. Your start-up may require funds for as long as 6 months to a year.

Adding your key money for start-up plus projected funds for all expenses including your compensation will give you an indication of what your total needs are. Now you can see the progression of Costing/Pricing to Break-even. Daily business monitoring will help you to determine at all times whether you are staying even, going ahead, or falling behind.

When costing/pricing each service, retail or manufacturing product, prepare a dated worksheet identified with a style number and description to be referenced for future comparison needs. Note that the profit for a service business is for each unit hour. In all other types of business the profit is for each unit piece.

The Costing/Pricing and Break-even formulas interact and are applicable in any type of business. The formulas are combined to help you forecast how much money you need for startup and ongoing operations while reaching for Break-even or better.
Key Steps Leading to Successful Business Start-up

1. Idea
2. Determining whether there is a need or demand for your product.
3. Costing/Pricing your product.
4. Test marketing your product.
5. Protecting your idea.
6. Surrounding yourself with the best qualified people regardless of task.
7. Determining the sales revenue required for Break-even.
8. Determining total required startup funds based on marketing projections to sustain business until actual Break-even is reached or better.
9. Determining pay back period for initial investment.
11. Maintaining a record-keeping system to monitor your daily activity and to measure your progress.
14. Knowing at the end of each day whether you are going ahead—staying even—or falling behind.
Criteria for Cost-Pricing and Break-Even Formulas

You may find yourself ready to startup a new business venture feeling comfortable that your service, manufactured or retail product is marketable, based on a suggested selling price. Do you and the product meet the following criteria?

1. **Product or Service Qualifications**
   - Need
   - Demand
   - Unique
   - Different
   - Better

2. **Cost of Product**
   - A) Labor,
   - B) Freight in,
   - C) Material -or- finished product for retail

3. **Cost of Sales**
   - A) Commission Only -or- Salary and Expenses -or- Draw Against Commission
   - B) Advertising

4. **Costing-Pricing**
   - Is your costing and pricing on target?
   - Is it a realistic margin of profit on cost or selling price?
   - Does it have an acceptable marketable price?
   - Does your profit margin allow you to be competitive and, at the same time, provide an ample profit to make Break-even while sustaining and giving you an opportunity to grow?

5. **Marketing**
   - Do you have the capabilities to sell?
   - Can you promote your product to create demand?
   - What is the competition in your chosen market?

6. **Expenses**
   - Have you examined:
     - a) administrative costs, including compensation
     - b) fixed and variable operating costs.

7. **Start-up Investment Needs**
   - What is required capital investment?
   - What is expected pay-back period of investment?
   - What is projected life expectancy of product?

8. **Break-even**
   - Are your sales, billing and receivables on schedule to meet cash flow needs?
   - Collections are just as important as sales.
   - At the end of the day, do you know whether you are making Break-even, going ahead or falling behind, to your satisfaction?

**NOTE:**

<table>
<thead>
<tr>
<th>Product Medium</th>
<th>Unit of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquid measure</td>
<td>gallon</td>
</tr>
<tr>
<td>solid measure</td>
<td>square foot</td>
</tr>
<tr>
<td>weights</td>
<td>pound</td>
</tr>
<tr>
<td>piece</td>
<td>each</td>
</tr>
<tr>
<td>time</td>
<td>hour</td>
</tr>
</tbody>
</table>
Glossary

PM%  Profit Margin Percentile
C    Cost/Unit
P    Profit/Unit
SP   Selling Price/Unit
SPF  Selling Price Factor
A    Administrative Expenses including Compensation
B    Fixed Expenses
C    Variable Expenses
D    Working Capital Loans (Pr + I)
E    Purchase of a Business Loan (Pr + I)
Pr   Principal
I    Interest
B/E  Break-Even
BEF  Break-Even Factor
**Principles of Simplified Formula**

**Costing/Pricing**

\[
\text{Cost of Product per Unit} \times \frac{\text{Suggested Profit Margin Percentile (\%)}}{} = \text{Profit per Unit Cost}
\]

\[
\text{Cost of Product per Unit} + \text{Profit per Unit Cost} = \text{Selling Price per Unit}
\]

**Profit Margin Percentile (%) per Unit Selling Price**

\[
\frac{\text{Profit per Unit Cost}}{\text{Selling Price per Unit}} = \frac{\text{Profit Margin Percentile (\%) per unit selling price}}{}
\]

**Break-even**

Total Expenses include

\[
\text{Administration - Compensation} + \frac{\text{Fixed and Variable Expenses}}{\text{Profit per Unit Cost in \$ or cents}} = \text{Unit Sales Required for Break-Even}
\]

\[
\text{Unit Sales Required} \times \text{Selling Price per Unit} = \text{Sales Revenue Required for Break-Even}
\]

**Determining Daily Revenue Required per Working Day**

\[
\frac{\text{Projected Annual Sales Revenue Required For Break - Even}}{\text{Annual Number of Working Days}} = \text{Daily Revenue Required per Working Day}
\]

**NOTE RE: Pages 29-31 - Costing/Pricing for All Industries**

When figuring the preliminary selling price and actual selling price, the unit cost of product in dollars or cents and cost of sales in percentile (%) are a given. When necessary, the actual unit selling price is raised in order to reach the profit margin percentile (%) goal while maintaining sales cost percentile (%), thus arriving at the actual selling price.
Ratios

1. \( (C) \text{ Cost / Unit} \times (\text{PM%}) = (P) \text{ Profit/Unit} \)

2. \( (C) + (P) = (SP) \text{ Selling Price/Unit} \)

3. \( (SP) - (C) = (P) \text{ Profit/Unit} \)

4. \( P / C = \text{PM% on C} \)

5. \( P / SP = \text{PM% on SP} \)

6. \( SP / C = (\text{SPF}) \text{ Selling Price Factor} \quad 1.0 + \text{PM% on C} = \text{Selling Price Factor} \)

7. \( (C) \times (\text{SPF}) = (SP) \)

8. \( SP / SPF = (C) \text{ Cost Limit} \)

9. \( SP / P = (\text{BEF}) \text{ Break Even Factor or additional sales req for each additional dollar of expense} \)

10. \( [(C \times \text{PM%}) + C] / C \times \text{PM%} = (\text{BEF}) \text{ Break Even Factor or additional sales req for each additional dollar of expense} \)

11. \( \frac{(\text{Expenses A+B+C+D})}{\text{P/Unit}} = \text{Unit Sales Req for } \frac{\text{SP/Unit}}{(\text{BE}) \text{ Break Even }} = \frac{\text{Sales Req for BE}}{(A+B+C+D \text{ Expenses})} = (\text{BEF}) \text{ Break Even Factor or additional sales req for each additional dollar of expense} \)

12. \( (\text{Expenses A+B+C+D}) \times \text{BEF} = \frac{\text{Sales Rev Req for BE}}{\text{SP/Unit}} = \text{Unit Sales Req for BE} \)

13. \( \text{Sales Rev Req for BE} / \text{BEF} = \text{Expense limit (A+B+C+D)} \)

14. \( \text{Projected annual expenses A+B+C+D} = \text{gross profit required for BE} \)

15. \( \text{For self employed in a service business, SPF = 1.0} \quad \text{BEF = 1.0} \)

16. \( \text{When the profit margin on cost equals 100%, SPF = 2.0} \quad \text{BEF = 2.0} \)
**Business Costs**

**Costing/Pricing**

Cost of Product or Service

I. \[ SP - C = P \]

\[ P = \text{PM}\% \text{ on } SP \]

II. \[ C \times \text{PM}\% = P \]

\[ C + P = SP \]

\[ P = \text{PM}\% \text{ on } C \]

\[ SP = S \text{ PF} \]

III. \[ SP = \text{BEF} \]

\[ \frac{(C \times \text{PM}\%)}{C \times \text{PM}\%} + C = \text{BEF} \]

---

**Break Even**

Operating Cost

Expenses

\[ A + B + C = \text{Unit Sales x SP/Unit = Sales revenue req for BE = BEF} \]

\[ \frac{P}{\text{Unit}} = \text{Req. for BE} \]

\[ A + B + C \]

Any additional expenses during the year, apply BEF to determine additional sales required for Break Even.
Profit Per Unit for Different Types of Business

Manufacturing
- Labor & Materials
- Profit per each Unit Piece

Retail/Wholesale
- Finished Product
- Profit per each Unit piece

Service
- Hours of Service
- Profit per each Unit Hour
Costing Pricing Your Product or Service

Method I

C x PM\% = P
$1.00 \times 50\% = .50
C + P = SP
$1.00 + .50 = $1.50

SP $1.50 = 1.5 SPF
C $1.00

C \times P\% = P
$1.00 \times 50\% = .50
Proof:

C \times SPF = SP
$1.00 \times 1.5 = $1.50

SP $1.50 = $1.00 cost limit
SPF 1.5

Table 1

<table>
<thead>
<tr>
<th>PM% on Cost</th>
<th>SPF</th>
<th>BEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>1.4</td>
<td>3.5</td>
</tr>
<tr>
<td>45%</td>
<td>1.45</td>
<td>3.222</td>
</tr>
<tr>
<td>50%</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>55%</td>
<td>1.55</td>
<td>2.8181</td>
</tr>
<tr>
<td>60%</td>
<td>1.6</td>
<td>2.666</td>
</tr>
</tbody>
</table>

Method II

Sp – C = P
$1.50 - $1.00 = .50

Determining Break Even Factor

Method I

\[
\frac{SP \, $1.50}{P} = 3.0 \text{ BEF or } $3.00 \text{ additional sales req for each additional dollar of expense}
\]

Method II

\[
\frac{(C \times P\%) + C}{($1.00 \times 50\%) + $1.00} = 3.0 \text{ BEF or } $3.00 \text{ additional sales req for each additional dollar of expense}
\]

Method III

\[
\frac{$15000 \text{ Expenses A+B+C}}{30000 \text{ unit} \times $1.50 \text{ SP/Unit}} = $45000 \text{ sales req for BE} = 3.0 \text{ BEF or } $3.00 \text{ additional sales req for each additional dollar of expense}
\]

Proof:

Annual Expenses A+B+C

$15000 \times 3.0 \text{ BEF} = $45000 \text{ Sales req for BE}
Cost of Shrinkage and Application of (BEF) Break Even Factor

.50 P = 33 1/3% PM on SP
$1.50 SP

.50 P = 50% PM on C
$1.00 C

50% PM on cost is equivalent to 33 1/3% PM on SP

$45000 x 33 1/3% PM on SP = $15000 gross profit
Sales req
For BE

$45000 - $15000 = $30000 Cost
Sales Req Gross Profit
for BE

$30000 x 3% = $900 Shrinkage
Cost Shrinkage Rate

$900 Shrinkage x 3.0 BEF = $2700 additional sales req for BE

Proof: A+B+C $15000 x 3.0 BEF
Annual P/I $1785 x 3.0 BEF
Shrinkage $900 x 3.0 BEF
Total Expenses $17685 = 35370 x $1.50 SP/ Unit = $53055 Total Sales req for BE
.50 P/Unit Unit Sales Req for BE

Sales Req for BE
$45000
$5355
$2700

Note: For W/C and or start up funds
$7000 loan @ 10% 5 yr term P/I $1785 yr

- Table 3
  Given: 250 wk days/yr
  Expenses $17685 = $71/day
  A+B+C
  Unit Sales 35370 = 142/day
  Sales $53055 = $213/day
Determine Gross Hourly Labor Cost Including Add-ons

Add-ons

a. Social Security  
b. Federal Unemployment Insurance  
c. State Unemployment Insurance  
d. Workers Compensation Insurance  
e. Holidays  
f. Vacation  
g. Miscellaneous Break Times  
h. Medical Insurance  
i. Pension Contribution  
j. Miscellaneous

1. \[
\text{Cost of Add-ons (a-j) } = \text{ Add-on Percentile} \\
\frac{2.00}{6.00} = 33 \frac{1}{3}\% \text{ of Basic Hourly Cost}
\]

2. \[
\text{Basic Hourly Cost } \times \text{ Add-On Percentile} = \text{ Cost of Add-Ons} \\
6.00/\text{Hour} \times 33 \frac{1}{3}\% = 2.00/\text{hour}
\]

3. \[
\text{Basic Hourly Cost} + \text{ Cost of Add-Ons} = \text{ Actual hourly cost Including add-ons} \\
6.00 + 2.00 = 8.00
\]

NOTE.  Man Hour Cost For Each Add-On  
Given- Annual Cost $500  
2 people @ 2000 hrs ea = 4000 hrs  
Annual Cost of Add-On = Cost/Man Hour  
Total Annual Man Hours  
\[
\frac{500}{4000 \text{ Hours}} = .125 \text{ dollars/Man Hour}
\]
### Determine Gross Hourly Labor Cost Including Add-ons

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentile</th>
<th>Add-on</th>
</tr>
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<tbody>
<tr>
<td>State employee training</td>
<td>1.1%</td>
<td>.066</td>
</tr>
<tr>
<td>State unemployment insurance</td>
<td>3.4%</td>
<td>.204</td>
</tr>
<tr>
<td>Federal unemployment insurance</td>
<td>.8%</td>
<td>.048</td>
</tr>
<tr>
<td>FICA</td>
<td>6.2%</td>
<td>.372</td>
</tr>
<tr>
<td>Medicare</td>
<td>1.45%</td>
<td>.087</td>
</tr>
<tr>
<td>1 week holiday</td>
<td>2.0%</td>
<td>.12</td>
</tr>
<tr>
<td>1 week vacation</td>
<td>2.0%</td>
<td>.12</td>
</tr>
<tr>
<td>Break time</td>
<td>5.0%</td>
<td>.30</td>
</tr>
<tr>
<td>Pension</td>
<td>3.0%</td>
<td>.18</td>
</tr>
<tr>
<td>Medical insurance</td>
<td>5.0%</td>
<td>.30</td>
</tr>
<tr>
<td>Workers compensation</td>
<td>2.0%</td>
<td>.12</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5.0%</td>
<td>.30</td>
</tr>
</tbody>
</table>

Total: 37% = $2.22

Basic hourly cost $6.00/hour  X  37% = $2.22/hour

Basic hourly cost $6.00/hour  +  $2.22/hour = $8.22/hour
## Application of Hourly Divisor and Gross Pay Divisor

<table>
<thead>
<tr>
<th>Annual Base Pay</th>
<th>Hourly Base Pay</th>
<th>Daily Base Pay</th>
<th>Actual Hourly Pay including Add-ons</th>
</tr>
</thead>
<tbody>
<tr>
<td>$18,750</td>
<td>$9.375</td>
<td>$75.00</td>
<td>$12.50</td>
</tr>
<tr>
<td>2000 hrs</td>
<td></td>
<td>6 hrs Divisor</td>
<td></td>
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### Actual Hourly Pay including Add-ons

<table>
<thead>
<tr>
<th>Actual Hourly Pay including Add-ons</th>
<th>Hourly Base Pay</th>
<th>Hourly Add-on</th>
<th>Add-on Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$12.50</td>
<td>$9.375</td>
<td>$3.125</td>
<td>$6,250</td>
</tr>
</tbody>
</table>

### Annual Pay including Add-ons

- Actual Hourly Pay including Add-ons: $12.50
- $12.50 $\times$ 2000 hrs = $25,000
- 4 Gross Pay Divisor

### Annual Gross Pay

- Proof: $25,000 $\div$ 4 = $6,250 Annual Cost of Add-ons

### Annual Gross Pay and Add-Ons

- Annual Gross Pay and Add-Ons: $25,000
- Annual Cost of Add-Ons: $6,250
- Annual Base Pay: $18,750

### Add-On %

- $6,250 $\div$ $18,750 = 33\frac{1}{3}\%$

### Proof

- hourly base: $9.375$
- Add-on %: 33\frac{1}{3}\%$
- $3.125$ Dollars Add-on
- $9.375$ Base hourly
- $12.50$ Actual hourly Pay

---

Note 1: lower gross pay divisor increases **Add-on** percentile

Note 2: lower hourly divisor increases **Add-on** percentile
Introduction to Costing / Pricing

<table>
<thead>
<tr>
<th>Cost of Product or Service</th>
<th>Suggested Margin</th>
<th>Profit in $$ or Cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>$$$ or Cents  x</td>
<td>of Profit</td>
<td>=</td>
</tr>
<tr>
<td>$1.00  x 50%</td>
<td></td>
<td>.50</td>
</tr>
</tbody>
</table>

Cost of Product + Profit = Selling Price

$1.00 + .50 = $1.50

Proof: Profit .50 = 50% PM% on cost
Cost 1.00

Profit .50______ = Profit per Selling Price Unit
Selling Price 33 1/3%
$1.50

50% Profit per Unit Cost is equivalent to 33 1/3% Profit per Unit Selling Price

Cost applies to a product or service business
Example:  
1. Service Business $1.00/hr
2. Retail or wholesale business $1.00 each piece
3. Manufacturing business $1.00 each piece

Determine Selling Price Factor

Method 1. \[
\frac{SP}{C} = 1.5 SPF
\]
SP $1.50
C $1.00

Method 2. \[
\frac{P}{C} + 1.0 = SPF
\]
\[
\frac{.50}{1.00} + 1.0 = 1.5 SPF
\]

Method 3. PM% on Cost + 100% = SPF

\[
50\% + 100\% = 150\%
\]
\[
.5 + 1.0 = 1.5 SPF
\]

Proof: \[
C \times SPF = SP
\]
$1.00 \times 1.5 = $1.50

-13-
**Break-Even**

Break-Even formula provides total sales units required for the break even and total sales revenue required for break even.

<table>
<thead>
<tr>
<th>Administrative expenses</th>
<th>Fixed Expenses</th>
<th>Variable Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Including compensation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>$25000 + $5000</td>
<td>Sales units required for break even</td>
<td></td>
</tr>
<tr>
<td>A + (B+C)</td>
<td>= 60000 units</td>
<td></td>
</tr>
</tbody>
</table>

Profit for each Unit .50

Sales Units Required for B/E X Selling price = Total Sale Revenue required for B/E

60000 units $1.50 each $90000

Projected daily sales required for Break Even

Total Annual Sales Revenue Required for B/E = Daily Sales Revenue Required for B/E

250 work days/year

$90000 = $360 per day

Sales Required for B/E = Additional Sales Required for each additional dollar of expense

A+B+C

$90000 = $3.00

$30000

$90000 = 3.0 B/E Factor (BEF)

$30000

Additional Expenses X BEF or additional sales required for each additional dollar of expense

Additional Sales Required for B/E

Sales Revenue Required for BE Limit of Expenses

$90000 = A+B+C

3.0 BEF $30000

Note: 1. Compensation includes add-ons
2. Annual P/I payments for working capital X BEF = Additional sales required for BE
Profit M% on SP Comes Into Play

Determine Shrinkage Cost

Cont’d From Pg 14

<table>
<thead>
<tr>
<th>Expression</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sales Req for B/E X PM% on SP</td>
<td>Profit</td>
</tr>
<tr>
<td>$90000 X 33 1/3%</td>
<td>$30000</td>
</tr>
<tr>
<td>Total Sales</td>
<td>Cost</td>
</tr>
<tr>
<td>$90000 - $30000</td>
<td>$60000</td>
</tr>
<tr>
<td>Cost X Shrinkage %</td>
<td>Total Dollar Shrinkage</td>
</tr>
<tr>
<td>$60000 X 5%</td>
<td>$3000</td>
</tr>
<tr>
<td>A + (B + C) + Shrinkage</td>
<td>Sales Units Req X SP = Total Sales</td>
</tr>
<tr>
<td>$25000 + $5000 + $3000</td>
<td>for B/E</td>
</tr>
<tr>
<td>Profit/Unit X .50</td>
<td>req for B/E</td>
</tr>
<tr>
<td></td>
<td>= 66000/unit X $1.50 = $99000</td>
</tr>
</tbody>
</table>
Determining Limit of Cost Based on Suggested Selling Price

**Example:** Marketing something that you think can carry a suggested selling price of $1.50 each, with marginal profit on selling price of 33 1/3%, sales cost of 10%, and 5% cost allowance for shrinkage and other hidden expenses based on the preliminary cost.

1.  
   \[
   \text{Selling Price} \times \frac{\text{Margin of Profit}}{100} = \text{Profit}
   \]
   \[
   \$1.50 \times \frac{33 \frac{1}{3}}{100} = \$0.50
   \]

2.  
   \[
   \text{Selling Price} - \text{Profit} = \text{Preliminary Cost}
   \]
   \[
   \$1.50 - \$0.50 = \$1.00
   \]

3.  
   \[
   \text{Selling Price} \times \frac{\text{Sales Cost Rate}}{100} = \text{Sales Cost}
   \]
   \[
   \$1.50 \times \frac{10}{100} = \$0.15
   \]

4.  
   \[
   \text{Preliminary Cost} \times \frac{\text{Shrinkage Rate}}{100} = \text{Shrinkage}
   \]
   \[
   \$1.00 \times \frac{5}{100} = \$0.05
   \]

5.  
   \[
   \text{Selling Price} - \left( \text{Profit} + \text{Sales Cost} + \text{Shrinkage} \right) = \text{Actual Cost Limit}
   \]
   \[
   \$1.50 - \left( \$0.50 + \$0.15 + \$0.05 \right) = \$0.80
   \]

Note:

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
<th>Actual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$0.80</td>
<td>50% Actual Profit on Cost</td>
</tr>
<tr>
<td>Profit</td>
<td>$0.50</td>
<td>50% Actual Profit on Cost</td>
</tr>
<tr>
<td>Sales Cost</td>
<td>$0.15</td>
<td>Total Cost $1.00 is equivalent to 33-1/3% Profit on Selling Price</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>$0.05</td>
<td>$1.00 Actual Cost</td>
</tr>
</tbody>
</table>
Given

C = $1.00
PM% = 40%
On cost
A + B + C = $30000-
250 work days/year

What is ?

1. Profit / Unit
2. SP/Unit
3. PM% on SP
4. What is SP factor
5. Sales Units req for B/E
6. Sales Revenue req for B/E
7. Sales revenue req/day
8. How much additional sales required for each additional dollar of expense
9. What is B/E factor
Operating Expense Costs for Doing Business

1. (A) Administration Expenses including Compensation
2. (B + C) Fixed or Variable expenses including the following and other things that pertain to your business:
   - Start-up costs
   - Accounting
   - Legal
   - Organizational Fees
   - Website
   - Travel
   - Trade Shows
   - Rent
   - Insurance
   - Fire-liability
   - Product liability
   - Omission and error
   - Vehicle (insurance, DMV, fuel, maintenance, replacement cost)
   - Utilities
   - Security
   - Advertising
   - Telephone
   - Internet (Website)
   - Bookkeeping
   - (For Retail business) - Labor costs
   - (Hidden expenses)

3. Working Capital to operate a business is ordinarily money borrowed for which principal and interest payments (D) are part of the expenses included in the B/E.

\[
\frac{A + B + C + D}{P/Unit} \times SP/unit = \frac{Total\ Sales\ Required\ for\ B/E}{P/Unit}
\]

Sales Projection:

\[
\frac{Total\ Annual\ Sales\ Required\ for\ B/E}{Annual\ Work\ Days} = \frac{Daily\ Sales\ Required\ for\ B/E}{Annual\ Work\ Days}
\]

\[
\frac{Total\ Sales\ Required\ for\ B/E}{A + B + C + D} = \frac{Additional\ Sales\ Dollars\ Required\ for\ each\ Additional\ dollar\ of\ expense}{\frac{B/E\ Factor}{Or}}
\]
## Costing-Pricing Example

### Cost Worksheet 6-12-04 Drinking Bottle

<table>
<thead>
<tr>
<th>Material</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle</td>
<td>.10</td>
</tr>
<tr>
<td>Cover</td>
<td>.05</td>
</tr>
<tr>
<td>Washer</td>
<td>.01</td>
</tr>
<tr>
<td>Vent Piece</td>
<td>.01</td>
</tr>
<tr>
<td>Mouth Piece</td>
<td>.02</td>
</tr>
<tr>
<td>Straw</td>
<td>.01</td>
</tr>
<tr>
<td>Carton (36pk-.72)</td>
<td>.02</td>
</tr>
</tbody>
</table>

*Freight is not included, everything delivered*

**Total** .22

<table>
<thead>
<tr>
<th>Labor</th>
<th>Cost</th>
</tr>
</thead>
</table>

*Hourly cost of Labor including add-ons - $8.00/hr*

**Total** 3 minutes

\[
C \times \text{PM\%} = P \\
.80 \times 50\% = .40
\]

\[
C + P = SP \\
.80 + .40 = $1.20
\]

\[
P = \frac{40}{C} = 50\% \text{ PM on Cost} \\
\]

\[
P = \frac{40}{SP} = 33\frac{1}{3}\% \text{ PM on SP} \\
SP = $1.20
\]

\[
SP = 1.20 = 1.5 \text{ SP Factor} \\
C = .80
\]

\[
\text{Proof: } C \times \text{SP Factor} = SP \\
.80 \times 1.5 = $1.20
\]

\[
\text{Total minutes} \times \text{C/min} \\
3 \times .13333 = .40
\]
Break-Even Examples

1.

\[
\begin{align*}
\text{Total Sales Units Required} & = A + B + C \\
\text{Profit/unit} & = 125,000/\text{units} \\
\text{SP} & = \$1.20 \\
\text{Total Sales Required for B/E} & = 125,000/\text{units} \times \$1.20 = \$150,000 = \$600/\text{day} \\
250 \text{ days} \\
\text{Total Sales Required for B/E} & = \$150,000 \\
\text{A + B + C} & = 3.0 \text{ BEF or } \\
\text{Profit/Unit} & = \$3.00 \\
\text{Cost of mould} & = \$20,000 \\
\text{D (Pr, I)} & = \$5106 \\
\text{Loan for 5 yrs @ 10% interest} & = \$5106 \\
\frac{\text{Additional sales required for each additional dollar of expenses}}{\text{Cost}} & = \frac{\$5106}{\$3.00} = \$15,318 \\
\end{align*}
\]

2.

\[
\begin{align*}
\text{Total Unit Sales Required for B/E} & = 137,765/\text{Units} \times \$1.20 = \$165,318 = \$662/\text{day} \\
250 \text{ days} \\
\text{Adding cost of shrinkage increases the amount of additional sales required for B/E.} \\
\text{Total Sales Required for B/E} & = \$150,000 \\
\text{PM% on SP} & = 33 1/3\% \\
\text{Profit} & = \frac{\$50,000}{\$150,000} = \frac{\$50,000}{\text{Total Sales Required for B/E}} \\
\text{Profit} & = \frac{\$50,000}{\$165,318} = \frac{\$50,000}{\$662/\text{day}} \\
\text{Cost} & = \$100,000 \\
\text{Shrinkage}\% & = 10\% \\
\text{Total Dollar Shrinkage} & = \$10,000 \\
\text{Additional Sales Required for each additional dollar of expense} & = \$3.00 \\
\text{Additional Sales Required for B/E} & = \$30,000 \\
\end{align*}
\]

3.

\[
\begin{align*}
\text{Total Sales Required for B/E} & = 165,318 \\
\text{Additional Sales Required for B/E} & = 30,000 \\
\text{Total Sales Required for B/E} & = 195,318 = \$782/\text{day} \\
250 \text{ days} \\
\end{align*}
\]
**Break Even Examples** (Cont’d from Page 20)

$50000 Loan for working capital (D) @ 10% 5 yr term = D $12750/yr P/I

\[
\begin{align*}
D \times BEF &= \text{Additional sales requirement for B/E} \\
$12750 \times 3.0 &= $38250/yr
\end{align*}
\]

A + B + C $50000
D $12750
P/I for mould $5106
Shrinkage $10000

Total Expenses $77856

\[.40 \text{ profit/unit} \times 194640 = \text{Unit Sales Req for B/E X SP} = \text{Sales Req for B/E} \times 1.20 = $233568 = $935/day\]

250 Days

Proof: Applying BEF or additional sales req for each additional dollar of expense

A + B + C + D

Total Expenses $77856

\[
\begin{align*}
\text{BEF} \times 3.0 &= \text{Sales Req for B/E} \\
\text{Or} \\
$3.00 &\text{ for each additional dollar of expense}
\end{align*}
\]

Annual Sales Req for B/E

<table>
<thead>
<tr>
<th>Annual Sales Req for B/E</th>
<th>Unit Sales Req for B/E</th>
<th>Daily Sales Req</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150000</td>
<td>125000 units</td>
<td>$600/day</td>
</tr>
<tr>
<td>$165318</td>
<td>137765 units</td>
<td>$662/day</td>
</tr>
<tr>
<td>$195318</td>
<td>162765 units</td>
<td>$782/day</td>
</tr>
<tr>
<td>$233568</td>
<td>194640 units</td>
<td>$935/day</td>
</tr>
</tbody>
</table>
### Break Even Examples (Cont'd from Page 21)

<table>
<thead>
<tr>
<th>A + B + C</th>
<th>SP</th>
<th>Sales Required for Break-Even</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50,000</td>
<td>$125,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>.40 Profit/Unit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unit Sales Required

\[ \text{Sales Required} \times \text{SP} = \text{Profit} \]

\[ \$150,000 \times \text{SP} = \$50,000 \]

\[ \frac{\text{Profit}}{\text{Cost}} \times (1 - \text{Shrinkage Rate}) = \frac{\text{Shrinkage}}{\text{BEF}} \times \text{BEF} \]

\[ \text{Additional Sales} \]

\[ \text{Sales} - \text{Profit} = \text{Cost} \times \text{Shrinkage Rate} = \frac{\text{Shrinkage}}{\text{BEF}} \times \text{BEF} \]

\[ \text{Additional Sales} \]

\[ \text{Sales} - \text{Profit} = \text{Cost} \times \text{Shrinkage Rate} = \frac{\text{Shrinkage}}{\text{BEF}} \times \text{BEF} \]

\[ \text{Total Sales Required:} \quad \$244,281.60 \]

### PROOF: EXPENSES | SHRINKAGE | BEF | SALES REQUIRED FOR BREAK-EVEN
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) $50,000.00</td>
<td>x 3.0</td>
<td>$150,000.00</td>
<td></td>
</tr>
<tr>
<td>(2) $10,000.00</td>
<td>x 3.0</td>
<td>30,000.00</td>
<td></td>
</tr>
<tr>
<td>(3) $17,856.00</td>
<td>x 3.0</td>
<td>53,568.00</td>
<td></td>
</tr>
<tr>
<td>(4) $3,571.20</td>
<td>x 3.0</td>
<td>10,713.60</td>
<td></td>
</tr>
</tbody>
</table>

\[ \$50,000.00 + \$10,000.00 + \$17,856.00 + \$3,571.20 \times 3.0 = \$244,281.60 \]
Summary of Pages 20, 21 and 22 (Cont’d from Page 22)

A + B + C $50000
P/I for mould $ 5106 unit sales Sales
P/I for W/C $12750 req for B/E SP/unit req for B/E
$67856 = 169640 X $1.20 = $203568 = 3.0 BEF or $3.00
.40 p/u $67856 additional sales req for ea
Sales req for B/E PM% on SP Profit (P)
$203568 x 33 1/3% = $67856

Sales (P) Cost (C)
$203568 - $67856 = $135712

(C) Shrinkage rate Shrinkage BEF
$135712 x 10% = $13571.20 X 3.0 = $40713.60 additional sales req for B/E
$203568.00 Sales Req
Total sales req for B/E $244281.60
### Determining Principal/Interest Payments for Working Capital Loan and Amount of Additional Sales Required for Break-Even

<table>
<thead>
<tr>
<th>Annual Sales Req For B/E</th>
<th>Projected Monthly Sales</th>
<th>Est. Months Working Capital</th>
<th>Loan Amount for W/C</th>
</tr>
</thead>
<tbody>
<tr>
<td>$233,568</td>
<td>$19,464/month</td>
<td>4 months</td>
<td>$77,856</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales Req. BE $233,568</th>
<th>Preliminary Sales BE $150,000</th>
<th>Additional Sales Req. $83,568</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Req. loan percentile 55.712%</td>
<td>X $50,000</td>
<td>= $27,856</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Loan Req. $27,856 + Original Loan $50,000</th>
<th>Total Loan Req. $77,856</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>(Prl) Original Loan $12,750 X 55.712%</th>
<th>Additional (Prl) BEF 3 0 = $21,310 = $85.24/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Additional Sales Req. B/E $233,568 X 3 1/3 PM% = $77,856 Profit</td>
</tr>
<tr>
<td></td>
<td>Sales $233,568 - Profit $77,856 = Cost $155,712</td>
</tr>
<tr>
<td></td>
<td>Shrinkage $10,000 / Cost $155,712 = 6.42% shrinkage rate on cost</td>
</tr>
<tr>
<td></td>
<td>Shrinkage $10,000 / Annual Sales Req. for B/E $233,568 = 4.28% Shrinkage Rate on Sales</td>
</tr>
</tbody>
</table>

1. Annual Sales Req. for BE/12 months = Projected Monthly Sales X Est. Months of W/C = W/C Loan Amt
2. Annual (Prl) for W/C Loan X BEF = Additional Sales Req. for BE
**Different Products or Services Sold in the Same Business**

Different products or services sold in the same business with different profit margins require a separate individual break even analysis to determine total sales revenue required for break even.

Basis $1.00 Cost/Unit in each Case

<table>
<thead>
<tr>
<th>PM%</th>
<th>P/U</th>
<th>SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>.40</td>
<td>$1.40</td>
</tr>
<tr>
<td>50%</td>
<td>.50</td>
<td>$1.50</td>
</tr>
<tr>
<td>60%</td>
<td>.60</td>
<td>$1.60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A+B+C</th>
<th>Unit Sales Req.</th>
<th>Sales Req. for BE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$77,856</td>
<td>194,640 Units</td>
<td>$272,496</td>
</tr>
</tbody>
</table>

\[
\text{Sales Req. for BE} \times 1.40 = \frac{90,832}{3}
\]

<table>
<thead>
<tr>
<th>PM% on Cost</th>
<th>Actual Sales Req.</th>
<th>1/3 of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>$272,496</td>
<td>$90,832</td>
</tr>
<tr>
<td>*50%</td>
<td>*$233,568</td>
<td>$77,856</td>
</tr>
<tr>
<td><strong>60%</strong></td>
<td>$207,616</td>
<td><strong>$69,205</strong></td>
</tr>
</tbody>
</table>

**50% Average PM% on Cost**

**$237,893 Total Sales Req. for BE**

In summary, apply the following for your break-even:

1. Lowest PM%
2. Lowest SPF

Resulting in:

3. Highest BEF
4. Highest unit sales required for break-even
**Costing-Pricing Worksheet for Manufacturing**

**Cost Worksheet**

<table>
<thead>
<tr>
<th>Material</th>
<th>Dated</th>
<th>Model # or description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Hourly cost of labor including Add-ons per/minute</td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td>description of assembly or operation ___ minutes</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>___ min</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>___ min</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>___ min</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>___ min</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>___ min</td>
</tr>
<tr>
<td>7. Carton</td>
<td></td>
<td>assembly of ctn, pkg, sealing ___ min</td>
</tr>
<tr>
<td>8. Freight in</td>
<td></td>
<td>total minutes ___ min</td>
</tr>
</tbody>
</table>

Total________

total minutes x cost/min _______

<table>
<thead>
<tr>
<th>Cost x PM% = P</th>
<th>1. Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>C + P = SP</td>
<td>2. Labor</td>
</tr>
<tr>
<td>P = PM% on cost</td>
<td>3. Total cost of material/labor</td>
</tr>
<tr>
<td>C = PM% on SP</td>
<td>4. Total cost of material/labor</td>
</tr>
<tr>
<td>______________</td>
<td>___________</td>
</tr>
<tr>
<td>______________</td>
<td>___________</td>
</tr>
<tr>
<td>______________</td>
<td>___________</td>
</tr>
<tr>
<td>______________</td>
<td>___________</td>
</tr>
<tr>
<td>______________</td>
<td>___________</td>
</tr>
</tbody>
</table>

P = PM% on cost x shrinkage rate

5. Suggested SP x Commission Rate ____________

6. Total Cost lines (3 - 4 - 5) ___________

7. Total Cost x PM % = P ___________

8. Cost + Profit = SP ___________

<table>
<thead>
<tr>
<th>SP = SP Factor</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>______________</td>
<td></td>
</tr>
</tbody>
</table>

Proof - C x SP Factor = SP

Break-Even

\[ \text{A + B + C + D} = \text{Sales Units required for B/E} \times \text{SP/Unit} = \text{Total Sales Revenue req. for B/E} \]

<table>
<thead>
<tr>
<th>Profit/Unit</th>
<th>[]</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________</td>
<td>X</td>
</tr>
</tbody>
</table>

Total Sales Revenue Req for B/E = BEF Break/Even Factor

Expenses A + B + C + D
Cost-Pricing Worksheet for Retail/Wholesale

Cost Worksheet  Dated  Model or Style #

1. Product  __________

2. Freight in  __________

3. Total Cost Lines 1 & 2  __________

4. Total Cost $ \times$ PM\% = P  __________

5. C + P = SP  __________

Cost $\times$ PM\% = P

\[
C + P = SP
\]

\[
\frac{P}{C} = \text{PM\% on Cost}
\]

\[
\frac{P}{SP} = \text{PM\% on SP}
\]

\[
\frac{SP}{C} = \text{SP Factor}
\]

Proof: \( C \times \text{SP Factor} = SP \)

Break-Even

A + B + C + D = Sales Units required for B/E  X  SP/Unit = Total Sales Revenue req. for B/E

Profit/Unit

\[
\text{Total Sales Revenue Req for B/E} = \text{BEF Break/Even Factor}
\]

A + B + C + D Expenses

Note: 1. Include retail sales clerk payroll with (A+B+C) expenses.
2. Include warehouse labor with (A+B+C) expenses.
3. Add shrinkage to (A+B+C) expenses or include with Costing/pricing.
Cost-Pricing Worksheet for A Service

<table>
<thead>
<tr>
<th>Cost worksheet</th>
<th>Dated</th>
<th>Job Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hourly cost including add-ons x PM% = P/Unit hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. C + P = SP/Unit hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Hours of Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hours of Travel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Total Lines 3-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Total Hours x SP/Unit hour = SP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cost x PM% = P

Note: 1. Costing with employee labor start with step 1-6
2. Self employed
cost/hr = profit/hr = selling price/hr

Proof: C x SP Factor = SP

Break-Even

A + B + C + D = Sales Units required for B/E X SP/Unit = Total Sales Revenue req. for B/E
Profit/Unit

_________ = X =

Total Sales Revenue Req for B/E = BEF Break/Even Factor or additional sales required for each additional dollar of expense

-27-
**Service Business**

**Self Employed**

<table>
<thead>
<tr>
<th></th>
<th>Selling Price</th>
<th>Cost of Services</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150/hr</td>
<td>$150/hr</td>
<td>$150/hr</td>
<td>$150/hr</td>
</tr>
</tbody>
</table>

\[
P \text{$/C} \quad $150 \quad = \quad 100\% \text{ Profit on Cost}
\]

\[
SP \text{$/SP} \quad $150 \quad = \quad 100\% \text{ Profit on SP}
\]

\[
SP \text{$/C} \quad $150 \quad = \quad 1.00 \text{ SPF}
\]

\[
A+B+C \quad \text{Sales Units Req.} \quad SP/Unit \quad \text{Sales Rev. Req. for BE}
\]

\[
$105,000 \quad = \quad 700 \text{ hrs} \quad \times \quad $150 \quad = \quad $105,000 \quad \text{=} \quad 1.0 \text{ BEF}
\]

\[
\text{Profit/hr}
\]

<table>
<thead>
<tr>
<th>Hrs of shrinkage</th>
<th>Hrly Cost</th>
<th>Cost of Shrinkage</th>
<th>BEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 hrs</td>
<td>$150</td>
<td>$450</td>
<td>1.0</td>
</tr>
</tbody>
</table>

\[
A+B+C \quad \text{Additional Sales Req. BE}
\]

\[
$105,000 \quad = \quad 700 \text{ hrs} \quad \times \quad $150 \quad = \quad $105,000
\]

\[
\text{Profit/hr}
\]

**With Employees**

<table>
<thead>
<tr>
<th></th>
<th>SP/hr</th>
<th>Labor cost/hr</th>
<th>Profit/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150</td>
<td>$50</td>
<td>($100)</td>
<td>$50</td>
</tr>
</tbody>
</table>

\[
P \text{$/C} \quad $50 \quad = \quad 50\% \text{ Profit on Cost}
\]

<table>
<thead>
<tr>
<th></th>
<th>A+B+C Unit Sales Req.</th>
<th>SP/hr</th>
<th>Sales Rev. Req. for BE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$105,000</td>
<td>2100/hrs</td>
<td>$150</td>
<td>$315,000</td>
</tr>
</tbody>
</table>

\[
\text{Profit/hr}
\]

Proof: \[
A+B+C \quad \text{BEF} \quad \text{Sales Rev. for BE}
\]

\[
$105,000 \quad \times \quad 3.0 \quad = \quad $315,000
\]

<table>
<thead>
<tr>
<th>Hrs of shrinkage</th>
<th>Hrly Cost</th>
<th>Cost of Shrinkage</th>
<th>BEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 hrs</td>
<td>$100/hr</td>
<td>$300</td>
<td>3.0</td>
</tr>
</tbody>
</table>

\[
A+B+C \quad \text{Additional Sales Req. BE}
\]

Proof: \[
A+B+C + \text{shrinkage} \quad \text{Units hrs Req. for BE} \quad \text{SP/hr} \quad \text{Sales Revenue Req. for BE}
\]

\[
$105,000 + $300 \quad = \quad 2,106 \text{ hrs} \quad \times \quad $150 \quad = \quad $315,900
\]

\[
\text{Profit/hr}
\]

Note: Hourly labor cost includes add-ons
Establishing Selling Price for Manufacturing

1. \[ \text{Cost of Material} + \text{Cost of Labor} \times \text{Rate of Profit Margin on Total Cost} = \text{Profit} \]
   \[ \begin{align*}
   &\text{Cost of Material} \quad \text{Cost of Labor} \quad \text{Rate of Profit Margin on Total Cost} \\
   &\$1.00 \quad \$1.00 \quad 50\% \\
   &\text{Profit} \quad \$1.00
   \end{align*} \]

2. \[ \text{[Cost of Material + Cost of Labor + Profit] \times Commission Rate} = \text{Preliminary Sales Price Comm.} \]
   \[ \begin{align*}
   &\text{Cost of Material} \quad \text{Cost of Labor} \quad \text{Profit} \quad \text{Commission Rate} \\
   &\$1.00 \quad \$1.00 \quad \$1.00 \quad 10\% \\
   &\text{Preliminary Sales Price Comm.} \quad \$0.30
   \end{align*} \]

3. \[ \text{Cost of Material} + \text{Cost of Labor} + \text{Profit} + \text{Commission} = \text{Preliminary Selling Price} \]
   \[ \begin{align*}
   &\text{Cost of Material} \quad \text{Cost of Labor} \quad \text{Profit} \quad \text{Commission} \\
   &\$1.00 \quad \$1.00 \quad \$1.00 \quad \$0.30 \\
   &\text{Preliminary Selling Price} \quad \$3.30
   \end{align*} \]

4. \[ \frac{\text{Profit}}{\text{Cost of Materials + Cost of Labor + Commission}} = \text{Preliminary Profit Margin \% on Cost} \]
   \[ \begin{align*}
   &\text{Profit} \quad \text{Cost of Materials} \quad \text{Cost of Labor} \quad \text{Commission} \\
   &\$1.00 \quad \$1.00 \quad \$1.00 \quad \$0.30 \\
   &\text{Preliminary Profit Margin \% on Cost} \quad 43.5\%
   \end{align*} \]

5. \[ \text{Actual Selling Price} \times \text{Commission Rate} = \text{Actual Commission} \]
   \[ \begin{align*}
   &\text{Actual Selling Price} \quad \text{Commission Rate} \\
   &\$3.48 \quad 10\% \\
   &\text{Actual Commission} \quad \$0.35
   \end{align*} \]

6. \[ \text{Cost of Materials} + \text{Cost of Labor} + \text{Actual Profit} + \text{Actual Commission} = \text{Actual Selling Price} \]
   \[ \begin{align*}
   &\text{Cost of Materials} \quad \text{Cost of Labor} \quad \text{Actual Profit} \quad \text{Actual Commission} \\
   &\$1.00 \quad \$1.00 \quad \text{?} \quad \$0.35 \\
   &\text{Actual Selling Price} \quad \$3.48
   \end{align*} \]

7. \[ \text{Actual Selling Price} - \text{[Cost of Materials + Cost of Labor + Actual Commission]} = \text{Actual Profit} \]
   \[ \begin{align*}
   &\text{Actual Selling Price} \quad \text{Cost of Materials} \quad \text{Cost of Labor} \quad \text{Actual Commission} \\
   &\$3.48 \quad \$1.00 \quad \$1.00 \quad \$0.35 \\
   &\text{Actual Profit} \quad \$1.13
   \end{align*} \]

8. \[ \frac{\text{Actual Profit}}{\text{Cost of Materials} + \text{Cost of Labor} + \text{Actual Commission}} = \text{Actual Profit Margin \% on Cost} \]
   \[ \begin{align*}
   &\text{Actual Profit} \quad \text{Cost of Materials} \quad \text{Cost of Labor} \quad \text{Actual Commission} \\
   &\$1.13 \quad \$1.00 \quad \$1.00 \quad \$0.35 \\
   &\text{Actual Profit Margin \% on Cost} \quad 48\%
   \end{align*} \]

NOTE: Always figure sales cost on selling price.

\[
\begin{align*}
\text{Selling Price Factor} & \quad \text{SP} \quad \$3.48 \\
\text{Cost} & \quad \text{C} \quad \$2.35 \\
\text{SPF} & = \quad 1.48 \text{ (SPF) Selling Price Factor}
\end{align*}
\]
Establishing Selling Price for Retail

1. Cost of Product $2.00 x Rate of Profit Margin % on Cost 50% = Profit $1.00

2. [Cost of Product + Profit] $2.00 + $1.00 x Sales Cost Rate % = Sales Cost on Prelim. Sales Price $10% .30

3. Cost of Product + Profit + Sales Cost $2.00 + $1.00 + .30 = Preliminary Selling Price $3.30

4. Profit $1.00
   Cost of Product + Sales Cost $2.00 + .30 = Profit Margin % on Preliminary Cost 43.5%

5. Actual Selling Price x Sales Cost Rate % = Actual Sales Cost $3.48 10% .35

6. Cost of Product + Actual Sales Cost + Actual Profit $2.00 + .35 + ? = Actual Selling Price $3.48

7. Actual Selling Price − [Cost of Product + Actual Sales Cost] = Actual Profit $3.48 $2.00 .35 $1.13

8. Actual Profit $1.13
   Cost of Product + Actual Cost of Sales $2.00 + .35 = Actual Profit Margin % on Cost 48%

NOTE: Always figure sales cost on selling price.

Selling Price Factor \(\frac{SP}{C}\) $3.48 = 1.48 (SPF) Selling Price Factor

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Establishing Selling Price for Services

Note: Add-ons included with cost of service labor

1. Cost of Service x Profit Margin on Cost = Profit
   $25.00 / hour x 50% = $12.50

2. [ Cost of Service + Profit ] x Sales Cost Rate = Sales Cost on Preliminary Sales
   Price $25.00 + $12.50 = $37.50
   $37.50 x 10% = $3.75

3. Cost of Service + Profit + Sales Cost = Preliminary Selling Price
   $25.00 + $12.50 + $3.75 = $41.25 / hour

4. Profit / Cost of Service + Sales Cost = Profit Margin % on Total Cost
   $12.50 / $28.75 = 43.5%

5. Actual Selling Price x Sales Cost Rate = Actual Sales Cost
   $45.00 / hour x 10% = $4.50

6. Cost of Service + Actual Sales Cost + Actual Profit = Actual Selling Price
   $25.00 + $4.50 + ? = $45.00

7. Actual Selling Price - [ Cost of Service + Actual Sales Cost ] = Actual Profit
   $45.00 - $25.00 - $4.50 = $15.50

8. Actual Profit / Cost of Service + Actual Cost of Sales = Actual Profit Margin on Total Cost
   $15.50 / $29.50 = 52.54%

Note 1: Always figure sales cost on selling price.
Note 2: See pages 36-37 for progression to Break-even and Start-up Costs.
Note 3: SP $45.00 = 1.5254 SPF
Note 4: PM% on Cost + 1.0 = SPF .5254 + 1.0 = 1.5254 SPF
Fundamental Principles of Break-even Formula for All Industries

I  (A) Fixed Expenses + (B) Flexible Expenses + (C) Admin. Expenses including Compensation

(Note): In Service Businesses, the profit per unit is for each hour of service; in all other businesses, the profit is per piece.)

II  For Mfg. Industries:  Profit / Unit = Profit in Dollars or Cents for Each Piece
     For Retail Industries:  Profit / Unit = Profit in Dollars or Cents for Each Piece
     For Service Industries:  Profit / Unit = Profit in Dollars for Each Hour of Service

a)  \( A + B + C \)  \( = \)  Unit Sales Required

b)  Unit Sales Required  \( \times \)  Selling Price / Unit = Sales Revenue Required for Break-Even

Example for Manufacturing or Retail Industries:

\[
\frac{A + B + C}{\text{Profit/Unit}} = \frac{50,000}{\$1.00/\text{piece}} \text{ Unit Sales Required}
\]

\[
50,000 \text{ Unit} \times \$2.00 \text{ each} = \$100,000 \text{ Sales Required for Break-Even}
\]

Example for Service Industries:

\[
\frac{A + B + C}{\text{Profit/Unit}} = \frac{3226 \text{ Hours}}{\$15.50/\text{Hour}} \text{ (Unit Sales Required)}
\]

\[
3226 \text{ Hours} \times \$45/\text{Hour} = \$145,170 \text{ Sales Revenue Required for B/E}
\]

III  Adjustment Factors

a)  Increase Sales
b)  Increase Profit Margin
c)  Reduce Expenses
d)  Combination of Above

IV  \[
\frac{(A) \text{ Total Fixed Expenses} + (B) \text{ flexible Expenses} + (C) \text{ Compensation}}{50 \text{ Weeks}} = \text{Actual Weekly Operating Expenses}
\]

50 weeks per calendar year is applied to take into consideration the 2 weeks closure of factory, store or office for vacation. Although there may be no activity, expenses must be paid. If the business operates 52 weeks per year, the additional profit can be a considerable safety factor to make Break-even, as more profit is generated.
Use of Factors in Establishing Selling Price for All Industries

Example for Services: (note: Sales cost included in factor)

1. 
   Service Charge per Hour = Factor
   $45.00 = 1.8
   Cost per Hour of Service
   $25.00

2. Service Charge per Hour \times Cost of Sales \% = Sales Cost
   $45.00 \times 10\% = $4.50

3. Service Charge per Hour - [Cost per Hour of Service + Sales Cost] = Profit
   $45.00 - ($25.00 + $4.50) = $15.50

4. Profit
   $15.50 = Profit Margin on Cost
   \frac{Cost per Hour of Service + Sales Cost}{Cost per Hour of Service + Sales Cost} = \frac{25.00 + 4.50}{25.00 + 4.50} = 52.5\%

See page 34 for adjustments applicable to your business.

Example for Manufacturing:

1. [Cost of Material + Cost of Labor] \times Factor = Selling Price
   $1.00 + $1.00 \times 1.7 = $3.40

2. Selling Price \times Commission Rate = Commission
   $3.40 \times 8\% = .27

   $3.40 - ($1.00 + $1.00 + .27) = $1.13

4. Profit
   $1.13 = Profit Margin % on Cost
   \frac{Cost of Material + Cost of Labor + Commission}{Cost of Material + Cost of Labor + Commission} = \frac{1.00 + 1.00 + .27}{1.00 + 1.00 + .27} = 49.8\%

See page 34 for adjustments applicable to your business.
Example for Retail:

1. Cost of Product \( \times \) Factor = Selling Price
   
   \[
   \text{Cost of Product} = 2.00 \quad \times \quad 1.7 \quad = \quad \text{Selling Price} \quad \text{\$3.40}
   \]

2. Selling Price \( \times \) Cost of Sales % = Sales Cost
   
   
   \[
   \text{Selling Price} = 3.40 \quad \times \quad 8\% \quad = \quad \text{Sales Cost} \quad .27
   \]

3. Selling Price - \[\text{Cost of Product} + \text{Sales Cost}\] = Profit
   
   \[
   \text{Selling Price} = 3.40 \quad - \quad \text{[Cost of Product} \quad + \quad \text{Sales Cost}] \quad = \quad \text{Profit} \quad 1.13
   \]

4. \[\frac{\text{Profit}}{\text{Cost of Product} + \text{Sales Cost}}\] = Profit Margin % on Cost
   
   \[
   \frac{\text{Profit}}{\text{Cost of Product} \quad + \quad \text{Sales Cost}} \quad = \quad \text{Profit Margin % on Cost} \quad 49.8\%
   \]

See below for adjustments applicable to your business.

Factor can be raised or lowered based on any of the following: (Example 1.7 to 1.8, or 1.7 to 1.6)

A. 1) Cost of Material  2) Cost of Labor  3) Cost of Product  4) Cost per Hour of Service
B. 1) Commission Rate  2) Cost of Advertising
C. 1) Selling Price  2) Service Charge per Hour
D. 1) Profit Margin Percentile (%) on Cost
Determining the Selling Price Factor, Break-Even Factor and Determining Sales Revenue Required for Each Additional Dollar of Operating Expenses

The Service Industry example is used for convenience only, although the method applies to any industry.

Begin by reviewing Service Industry example, page 31 dealing with Costing-Pricing and page 32 dealing with Break-Even.

Using the numbers from the examples proceed to determine the following:

1. **Selling Price Factor**

   \[
   \text{Selling Price} \quad \frac{\$45.00}{\text{Cost/Hour of Service Labor} + \text{Cost of Sales}} = \text{Selling Price Factor} \quad 1.5254
   \]

   \[
   (\text{Cost/hour Service Labor} + \text{Cost of Sales}) \times \text{Selling Price Factor} = \text{Selling Price}
   \]

   \[
   \frac{\$25.00}{\$4.50} \times 1.5254 = \$45.00
   \]

2. **Break-Even Factor**

   \[
   \text{Sales Revenue required for Break-Even} \quad \frac{\$145,170}{\text{administration/compensation \ fixed \ variable expenses \ expenses}} = \text{Break-Even Factor} \quad 2.9034
   \]

   \[
   (A + B + C) \times \text{Break-Even Factor} = \text{Sales Revenue Required for Break-Even}
   \]

   \[
   \frac{\$50,000}{2.9034} = \$145,170
   \]

3. **Sales Revenue required for each additional dollar of operating expenses**

   \[
   \frac{\$145,170}{\text{Sales Revenue required for Break-Even}} = \frac{\$2.91}{\text{\(A + B + C\) Operating Expenses}}
   \]
Determining Cash Required for Start-Up

Example for Service Industry: (Cont’d. from page 32)

(A) Fixed Expenses  +   (B) Flexible Expenses  +   (C) Admin Expenses including Compensation

\[
\frac{(A + B + C)}{\text{Unit Sales Required}} = \frac{\text{Profit/Unit}}{\text{Sales Revenue Required for Break-even}}
\]

\[
\frac{50,000}{15.50/\text{Hour}} = \frac{3226 \text{ Hours}}{\$145,170}
\]

Unit Sales Required \times \text{Selling Price/Unit} = \text{Sales Revenue Required for Break-even}

Projected Annual Sales Revenue Required for Break-even = Daily Revenue Required for Break-Even per Working Day

Annual Number of Working Days

\[
\frac{\$145,170}{250 \text{ working days in 12 mo.}} = \$581 \text{ per working day}
\]

Annual Sales Revenue Required for Break-even = \$145,170

Late Payment Reserve 1 month 2 months 3 months

\[
\begin{align*}
12,098 & \quad 24,195 & \quad 36,293 \\
\text{(key money)} & \quad \text{Startup Capital may include:} & \quad \text{Estimate } \$15,000 \\
a) & \quad 1 \text{ month’s rent and security} & \quad \text{Estimate } \$15,000 \\
b) & \quad \text{minimum insurance premium} & \quad \text{3 month’s late payment reserve} & \quad \$36,293 \\
c) & \quad \text{energy deposit plus 1 month’s service cost} & \quad \text{$51,293} \\
d) & \quad \text{telephone deposit plus 1 month’s service cost} & \quad \text{Office equipment} & \quad \text{Office supplies} \\
e) & \quad \text{office equipment} & \quad \text{Office supplies} & \quad \text{3 month’s late payment reserve} & \quad \$36,293 \\
f) & \quad \text{office supplies} & \quad & \quad \text{3 month’s late payment reserve} & \quad \$51,293 \\
\end{align*}
\]

Note 1: loan schedule 5 years

\[
\begin{align*}
\text{principal} & \quad \$51,293 \quad (A + B + C) + D \text{ annual total } = \$63,095 \\
\text{interest rate} & \quad 10\% \quad \$50,000 \quad \$13,095 \\
\end{align*}
\]

A + B + C + D \times \text{Sales Price/Unit HR} = \text{Sales Revenue Required for Break-even}

\[
\begin{align*}
63,095 \times 4071 \text{ hrs} \times \$45.00/\text{Hr} \times \frac{\$183,180}{250/\text{days}} = \$733/\text{day}
\end{align*}
\]
Note: Extending credit requires:

1. Additional working capital
2. Problems with credit and collections

Loan for Start Up Costs Principal
Loan for Working Capital
Total

Loans Annualized
Start up principal/interest
Working capital principal/interest
Total Principal/Interest

Add total annual principal/interest to A+B+C+D (expenses) for Break Even calculation
**Determining Evaluation for Purchase or Sale of a Business**

You are about to purchase a business. Some knowledge, experience and a due diligence effort to verify all facts and figures are prerequisite. Money borrowed from yourself or from a bank must be paid back with interest, subject to the payback terms that meet your criteria of comfort and ability to operate the business profitably. The Service Industry example is only used for convenience, although the method applies to every business.

**Step 1.** Begin by reviewing Service Industry example, page 31, dealing with costing-pricing and and page 32, the Break-Even.

**Step 2.** Follow through with applying the Break-Even formula on pages 36-37 by adding (D) payments of $13,095 per year for the five-year loan of $51,293 @ 10% interest for key money and working capital to the (A + B + C) which now becomes (A + B + C + D). With compensation of $35,000 per year and a suggested multiplier of (4x) earnings, the purchase price is $140,000 and it too will become a loan. Adding (E) payments of $22,203 per year for the ten-year term loan of $140,000 @ 10% interest for purchase money to the (A + B + C + D) now becomes (A + B + C + D + E) and increases the sales revenue required for the Break-Even to $247,680. It now reaches the point when you ask yourself whether the purchase price meets your criteria for being comfortable with the loan payback terms and required sales revenue for Break-Even.

<table>
<thead>
<tr>
<th>Unit Sales</th>
<th>Required For</th>
<th>Selling Price</th>
<th>Revenue Required For</th>
</tr>
</thead>
<tbody>
<tr>
<td>A + (B + C) + D + E</td>
<td>Break-Even</td>
<td>Per Hour</td>
<td>Break-Even</td>
</tr>
<tr>
<td>$35,000 + $15,000 + $13,095 + $22,203</td>
<td>$15.50/hour profit per unit</td>
<td>= 5504 hrs. x $45.00/hr.</td>
<td>= $247,680</td>
</tr>
</tbody>
</table>

Step 2 is repeated, substituting numbers that will enable you to be comfortable with your projections and decide whether to purchase the business.

As the 11th year is reached, the $191,293 loans are matured, saving $35,298 per year from principal and interest payments providing:

1. $51,293 working capital free and clear
2. Choices of either (a) or (b)
   (a) $35,000 compensation may be gradually increased to $70,298
   (b) $51,293 working capital may be gradually increased to $86,591, allowing for increased sales.
3. A Capital gain may be realized if and when the business is sold.

**Suggested Selling Price**

Current 12 month’s compensation x earnings multiplier = Selling Price

$70,298 x 4 = $281,192
Summary Review

Costing – Pricing formula provides:

1. Profit per unit cost based on given profit margin percentile (%)
2. Selling price per unit

Example:

\[
\begin{align*}
\text{Cost of Product per Unit} & \times \text{Suggested Profit Margin \%} = \text{Profit per Unit Cost} \\
$1.00 & \times 50\% = $0.50 \\
\text{Cost of Product per Unit} + \text{Profit per Unit} = \text{Selling Price per Unit} \\
$1.00 + $0.50 = $1.50 \\
\text{Profit per Unit Cost} + \text{Selling Price per Unit} = \text{Profit Margin Percentile \%} \text{ per Unit Selling Price} \\
$0.50 + $1.50 = 33 1/3\% \\
\end{align*}
\]

Note: 50% profit per unit cost is equivalent to 33 1/3% profit per unit selling price.

Break-Even formula provides:

1. Unit Sales required for Break-Even
2. Sales revenue required for Break-Even

\[
\begin{align*}
\text{Total administrative expenses including compensation + fixed + variable expenses} & = \text{Unit Sales required for Profit per unit in dollars or cents} \\
(A + B + C) & = \text{Unit Sales required for Break-Even} \\
\text{Unit Sales required for Break-Even} \times \text{Selling price per unit} & = \text{Sales revenue required for Break-Even}
\end{align*}
\]

Determining cash required for start-up provides:

The projected Break-Even point when (D) (Key money plus working capital) payments for payback of principal and interest for money borrowed from oneself or bank is added to the (A + B + C) in the Break-Even formula which now becomes (A+B+C+D).

Determining purchase price for business provides:

The projected Break-Even point when payments for payback of principal and interest for (D) Key money plus working capital and (E) Purchase money borrowed from oneself or the bank are added to the (A+B+C) in the Break-Even formula which now becomes (A+B+C+D+E).
Primer for Business Success

By Arnold Jaffa

1. Motivation is the key to success.
2. Sales are the key to any business.
3. A salesperson is only as good as the product.
4. Quality sells 12 months a year.
5. Courteous manners, promptness, a quality product and service are all important.
6. It takes a thousand years to make a customer, but just one second to lose one.
7. Your homework includes knowing your product, customer, merchandising, costing, marketing, credit checks, and making an appointment.
8. Test market your service or product to see whether you have a marketable product or service with an acceptable selling price.
9. Unless you have sales ability, ideas, creativity, and inventiveness will lead you nowhere.
10. If you have the ability to promote your idea, you will then create the need for your product.
11. A business plan is the fundamental tool in raising and utilizing capital, but must be accompanied by the need for a product that is better than and different from what is currently being offered in the marketplace.
12. Buy little and pay often.
13. Walk before you run.
14. Experience is the best teacher.
15. Different fingerprints, different personalities.
16. Good work ethics include good work habits, dedication and discipline.
17. If it can be done today, don’t leave it for tomorrow.
18. Along the way, continue to set new goals.
19. Before accepting an obligation, know your limitations and understand what has to be done.
20. Collections are a key priority and sometimes must be given precedence over seeking new business.
21. Verify all facts given to you before accepting them as truth.
22. A customer becomes one after the bill is paid.
23. The only boss is the customer.
24. When you run out of money, no more mistakes.
25. Hard work and long hours will not hurt you, but aggravation will.
26. Knowing each day that you have done your best will help you achieve satisfaction and sleep better at night.
27. Business and work can be fun; it all depends on how you approach it.
28. Think of your business as a game with rules and penalties.
29. Good record keeping provides a progress report of your business.
30. A credible individual only has one’s word, signature and handshake.
31. Money is round, it comes and goes, but you can’t buy credibility. You have to earn it.
32. Integrity and honesty are chief ingredients in business. They are keys to success.
33. It is not how much business you do, but how much profit you keep.
34. Based on past performance, a successful business person can, at the beginning of each year, predict the “x” amount of business that will be realized.
35. Start each day when putting the key in the door as if you have nothing to eat and are hungry.
36. Never take your business for granted, otherwise it may be the beginning of the end.
37. When in doubt, ask first.
38. Success is based on an ongoing learning process.
39. Assumptions for starting a business: good health and ample funds for a good head start.
40. Money is hard to make, easy to lose.
41. Think of each penny saved in terms of how much you would need to invest for a whole year.
42. Are you a “coulda, woulda, shoulda” person?
43. Do you want to be in the 1% or 99%?
44. There are two kinds of people in this world: those that turn gold into nothing, and those that turn nothing into gold.
45. Every successful business requires a continuous flow of happy, satisfied customers.
46. Treat each penny like it is your last.
47. Think like a banker.
48. Each second that passes without being productive can never be replaced or made up; it is lost forever.
49. Without sales you don't have a business.
50. Innovation and creativity is the result of the force of necessity.
51. Run your business for profit, not a benefit show.
52. Everyday you put the key in the door, you are starting in business all over again.
53. Having a passion for what you are doing is a giant plus for whatever you undertake.
54. Build sound and friendly relationships.
55. Say what you mean and mean what you say.
56. Be 100% honest with yourself so that you can be 100% honest with others.
57. If you think you can fool anyone, you are fooling yourself.
58. Communicate promptly.
59. Promise later delivery and deliver on time or earlier.
60. Never quote a price and go back to say you misquoted.
61. When in doubt, check it out.
62. Be motivated at all times.
63. Be able to identify a problem and focus on correcting it as soon as possible.
64. Be a decision maker.
65. Be a self starter.
66. Be a people person.
67. Be creative.
68. Be assertive.
69. Be diplomatic.
70. Prioritize the daily “to do” list.
71. Prepare your “to do” list at the end of each day for the following day.
72. Do not procrastinate.
73. You are selling yourself 100% of the time.
74. Your customer or clients are buying you, your product or service follows.
75. Have no doubt about the next step you are going to take.
76. The learning you acquire by struggling through the numbers helps you to understand your business.
77. If you can explain the numbers you will gain credibility when presenting your plan to bankers or investors.
78. The two things that are the principle cause of failure in business are:
   a. Lack of a business plan.
   b. Under capitalization (lack of start up money)
79. In God we trust, all others pay cash.
80. God helps those who help themselves.
81. You have to make it happen; nothing happens by itself.
82. It is not how many customers or clients you have today, but how many you keep for tomorrow.
83. Business principles have not changed over time. What has changed is the acceleration of information.
84. Prepare your business plan based on the marketing feedback and break-even analysis projections for required sales revenue and operating expense limit.
85. Plan to have enough working capital and startup funds to help you keep going until you reach break-even or better within a reasonable period of time (6 months to a year, etc.).
86. Now that you have learned about the tools of business, you can readdress your weakness. Do this before expending effort, time and money. If you think you are ready, give it a try.
87. If someone fails, we all lose; if someone succeeds, we all benefit in this nation.
88. The reward is knowing that everyone in our country benefits when you are successful.

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Summary

Before borrowing money from yourself or an outside bank:

Step 1  Ask yourself whether you are truly motivated to start up a business. Write down the reasons for doing so. Is your product or service unique, different and better than what is in the market place?

Step 2  Are you certain that all the facts and figures to be used for costing/pricing and break-even analysis for your service or product are accurate?

Step 3  Did you test market your service or product to see whether you have a marketable product or service with an acceptable selling price? What is the potential-competition-life expectancy of the intended business?

Step 4  Did you prepare your business plan based on the marketing feedback and break-even analysis projections for required sales revenue and operating expenses?

Step 5  Plan to have enough working capital and start up funds to keep you going until you reach break-even or better within a reasonable period of time (6 months to 1 year, etc.)

Step 6  Read the one-liners. It is based on my own life’s business experience.
C \times \text{PM\%} = P \\
\$1.00 \times 40\% = .40 \\
C + P = SP \\
\$1.00 + .40 = \$1.40 \\

\begin{align*}
P &= \frac{.40}{\$1.40} = 28.57\% \text{ PM\% on SP} \\
\text{SP} &= \$1.40 = 1.4 \text{ SP factor} \\
C &= 1.00 \\
\end{align*}

A + (B + C) \text{ Sales units req for B/E} \times \text{SP} = \text{Sales req for B/E} \\
\$25000 + \$5000 = 75000/\text{units} \times \$1.40 = \$105000 = \$420/\text{day} \\
\text{Profit/unit} = .40 \\

\begin{align*}
\text{Sales revenue req for B/E} &= \text{Additional Sales revenue req for each} \\
\$105000 &= \text{additional dollar of expense} \\
A + B + C &= \$3.50 \\
\$30000 &= \text{or B/E factor 3.5} \\
\text{Proof} &= A + B + C \times \text{B/E factor} = \text{Sales req for B/E} \\
\$30000 \times 3.5 &= \$105000 \\
\end{align*}

Additional methods to determine SPF

Method 2 \quad P + 1.0 = \text{SPF} \\
C \quad .40 + 1.0 = 1.4 \text{ SPF} \\
\$1.00 \\

Method 3. \quad \text{PM\% on cost} + 100\% = \text{SPF} \\
40\% + 100\% = 140\% \\
.4 + 1.0 = 1.4 \text{ SPF} \\

Method to determine Break Even Factor

\begin{align*}
\text{SP} &= \$1.40 \\
P &= \$ .40 = 3.5 \text{ B/E factor or} \$3.50 \text{ additional sales required for each additional dollar expense.}
\end{align*}

10-1-12