

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

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 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 Debbe Sandoval of SCORE for her typing assistance as I progressed through different stages of formulation and to 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 for helping to make typographical changes.

Since August 1982 I have volunteered to counsel people on a one to one basis through SCORE, the Service Corps of Retired Executives Association, 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.

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Introduction

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. 7-9). The cost per unit for **Service** industry includes labor cost per unit hours plus sales cost per unit. (Example--\$15.00/hour or \$25.00/hour or whatever market price you must pay in order to hire an employee plus sales cost per unit sale. 5% or 10% (commission, advertising, etc.) or whatever percentile you must pay. The cost per unit for the **Manufacturing** industry includes labor cost per hour plus material cost per unit plus sales cost per unit sale (commission, advertising, etc.). The cost per unit for the **Retail** industry includes product unit cost plus sales cost (commission, sales clerk hourly wage, advertising, etc.).

After you are experienced in your business you can apply a second method for costing/pricing using a factor (see examples pgs. 10 and 11). 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 on the bottom of page 11). 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 replacement 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 12. 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 page 14, 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.
10. Preparing a business plan based on projected goals set forth.
11. Maintaining a record-keeping system to monitor your daily activity and to measure your progress.
12. Planning ahead.
13. Maintaining flexibility.
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: <u>Product Medium:</u>	<u>Unit of Measure:</u>
liquid measure	gallon
solid measure	square foot
weights	pound
piece	each
time	hour

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

Principles of Simplified Formula

Costing/Pricing

Cost of Product per Unit x Suggested Profit Margin Percentile (%) = Profit per Unit Cost

Cost of Product per Unit + Profit per Unit Cost = Selling Price per Unit

Profit Margin Percentile (%) per Unit Selling Price

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

Break-even

Total Expenses include

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

in \$\$ or cents

Unit Sales Required x Selling Price per Unit = Sales Revenue Required for Break-Even

Determining Daily Revenue Required per Working Day

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

NOTE RE: Pages 7-9 - 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.

Introduction to Costing / Pricing

$$\begin{array}{r} \text{Cost of Product} \\ \text{\$\$ or Cents} \\ \$1.00 \end{array} \quad \times \quad \begin{array}{r} \text{Suggested Margin} \\ \text{of Profit} \\ 50\% \end{array} \quad = \quad \begin{array}{r} \text{Profit in \$\$ or Cents} \\ \text{per Unit Cost} \\ .50 \end{array}$$

$$\begin{array}{r} \text{Cost of Product} \\ \$1.00 \end{array} \quad + \quad \begin{array}{r} \text{Profit} \\ .50 \end{array} \quad = \quad \begin{array}{r} \text{Selling Price} \\ \$1.50 \end{array}$$

$$\frac{\begin{array}{r} \text{Profit} \\ .50 \end{array}}{\begin{array}{r} \text{Selling Price} \\ \$1.50 \end{array}} \quad = \quad \begin{array}{r} \text{Profit per Selling Price Unit} \\ 33 \frac{1}{3}\% \end{array}$$

50% Profit
per
Unit Cost

is equivalent to

33 1/3%
per
Unit Selling Price

Determine Gross Hourly Labor Cost Including Add-ons

Add-ons

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

1.
$$\frac{\text{Cost of Add-ons (a-i)}}{\text{Basic Hourly Cost}} = \text{Add-on Percentile}$$
$$\frac{\$ 2.00}{\$ 6.00} = 33 \frac{1}{3}\% \text{ of Basic Hourly Cost}$$
2.
$$\begin{array}{rclcl} \text{Basic Hourly Cost} & \times & \text{Add-On Percentile} & = & \text{Cost of Add-Ons} \\ \$6.00/\text{Hour} & \times & 33 \frac{1}{3}\% & = & \$2.00/\text{hour} \end{array}$$
3.
$$\begin{array}{rclcl} \text{Basic Hourly Cost} & + & \text{Cost of Add-Ons} & = & \text{Actual hourly cost} \\ & & & & \text{Including add-ons} \\ \$6.00 & + & \$2.00 & = & \$ 8.00 \end{array}$$
4.
$$\frac{\text{Basic Hourly Cost} \times 8 \text{ hours}}{6 \text{ Hours}} = \text{Actual hourly cost}$$
5.
$$\frac{\$6.00 \times 8 \text{ hours}}{8 \text{ hours}} = \$8.00/\text{hour}$$

Establishing Selling Price for Retail

1.
$$\begin{array}{r} \text{Cost of Product} \\ \$2.00 \end{array} \times \begin{array}{r} \text{Rate of Profit Margin \% on Cost} \\ 50\% \end{array} = \begin{array}{r} \text{Profit} \\ \$1.00 \end{array}$$
2.
$$\begin{array}{r} [\text{Cost of Product} \\ \$2.00 \end{array} + \begin{array}{r} \text{Profit} \\ \$1.00 \end{array}] \times \begin{array}{r} \text{Sales Cost Rate \%} \\ 10\% \end{array} = \begin{array}{r} \text{Sales Cost on Prelim. Sales Price} \\ .30 \end{array}$$
3.
$$\begin{array}{r} \text{Cost of Product} \\ \$2.00 \end{array} + \begin{array}{r} \text{Profit} \\ \$1.00 \end{array} + \begin{array}{r} \text{Sales Cost} \\ .30 \end{array} = \begin{array}{r} \text{Preliminary Selling Price} \\ \$3.30 \end{array}$$
4.
$$\frac{\begin{array}{r} \text{Profit} \\ \$1.00 \end{array}}{\begin{array}{r} \text{Cost of Product} \\ \$2.00 \end{array} + \begin{array}{r} \text{Sales Cost} \\ .30 \end{array}} = \begin{array}{r} \text{Profit Margin \% on Preliminary Cost} \\ 43.5\% \end{array}$$
5.
$$\begin{array}{r} \text{Actual Selling Price} \\ \$3.48 \end{array} \times \begin{array}{r} \text{Sales Cost Rate \%} \\ 10\% \end{array} = \begin{array}{r} \text{Actual Sales Cost} \\ .35 \end{array}$$
6.
$$\begin{array}{r} \text{Cost of Product} \\ \$2.00 \end{array} + \begin{array}{r} \text{Actual Sales Cost} \\ .35 \end{array} + \begin{array}{r} \text{Actual Profit} \\ ? \end{array} = \begin{array}{r} \text{Actual Selling Price} \\ \$3.48 \end{array}$$
7.
$$\begin{array}{r} \text{Actual Selling Price} \\ \$3.48 \end{array} - [\begin{array}{r} \text{Cost of Product} \\ \$2.00 \end{array} + \begin{array}{r} \text{Actual Sales Cost} \\ .35 \end{array}] = \begin{array}{r} \text{Actual Profit} \\ \$1.13 \end{array}$$
8.
$$\frac{\begin{array}{r} \text{Actual Profit} \\ \$1.13 \end{array}}{\begin{array}{r} \text{Cost of Product} \\ \$2.00 \end{array} + \begin{array}{r} \text{Actual Cost of Sales} \\ .35 \end{array}} = \begin{array}{r} \text{Actual Profit Margin \% on Cost} \\ 48\% \end{array}$$

NOTE: Always figure sales cost on selling price.

Use of Factors in Establishing Selling Price for All Industries

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

1.
$$\frac{\text{Service Charge per Hour}}{\text{Cost per Hour of Service}} = \text{Factor}$$

$$\frac{\$45.00}{\$25.00} = 1.8$$
2.
$$\text{Service Charge per Hour} \times \text{Cost of Sales \%} = \text{Sales Cost}$$

$$\$45.00 \times 10\% = \$4.50$$
3.
$$\text{Service Charge per Hour} - [\text{Cost per Hour of Service} + \text{Sales Cost}] = \text{Profit}$$

$$\$45.00 - [\$25.00 + \$4.50] = \$15.50$$
4.
$$\frac{\text{Profit}}{\text{Cost per Hour of Service} + \text{Sales Cost}} = \text{Profit Margin on \% Cost}$$

$$\frac{\$15.50}{\$25.00 + \$4.50} = 52.5\%$$

See page 11 for adjustments applicable to your business.

Example for Manufacturing:

1.
$$[\text{Cost of Material} + \text{Cost of Labor}] \times \text{Factor} = \text{Selling Price}$$

$$[\$1.00 + \$1.00] \times 1.7 = \$3.40$$
2.
$$\text{Selling Price} \times \text{Commission Rate} = \text{Commission}$$

$$\$3.40 \times 8\% = .27$$
3.
$$\text{Selling Price} - [\text{Cost of Material} + \text{Cost of Labor} + \text{Commission}] = \text{Profit}$$

$$\$3.40 - [\$1.00 + \$1.00 + .27] = \$1.13$$
4.
$$\frac{\text{Profit}}{\text{Cost of Material} + \text{Cost of Labor} + \text{Commission}} = \text{Profit Margin \% on Cost}$$

$$\frac{\$1.13}{\$1.00 + \$1.00 + .27} = 49.8\%$$

see page 11 for adjustments applicable to your business.

Use of Factors in Establishing Selling Price for All Industries (Continued)

Example for Retail:

1.	Cost of Product	x	Factor	=	Selling Price
	\$2.00		1.7		\$3.40
2.	Selling Price	x	Cost of Sales %	=	Sales Cost
	\$3.40		8%		.27
3.	Selling Price	-	[Cost of Product	+ Sales Cost]	= Profit
	\$3.40		\$2.00	.27	\$1.13
4.			Profit		
			\$1.13		
	<u>Cost of Product</u>	+	<u>Sales Cost</u>	=	Profit Margin % on Cost
	\$2.00		.27		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 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.	Selling Price	x	Margin of Profit	=	Profit	
	\$1.50		33 1/3%		.50	
2.	Selling Price	-	Profit	=	Preliminary Cost	
	\$1.50		.50		\$1.00	
3.	Selling Price	x	Sales Cost Rate	=	Sales Cost	
	\$1.50		10%		.15	
4.	Preliminary Cost	x	Shrinkage Rate	=	Shrinkage	
	\$1.00		5%		.05	
5.	Selling Price	-	[Profit	+ Sales Cost	+ Shrinkage] = Actual Cost Limit	
	\$1.50		.50	.15	.05	.80

Note:

Cost	.80	Profit	<u>.50</u>	50% Actual Profit on Cost
Sales Cost	.15	Total Cost	\$1.00	is equivalent to a 33% Profit on Selling Price
Shrinkage	<u>.05</u>			
	\$1.00			

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) $\frac{A + B + C}{\text{Profit / Unit}} = \text{Unit Sales Required}$

b) $\text{Unit Sales Required} \times \text{Selling Price / Unit} = \text{Sales Revenue Required for Break-Even}$

Example for Manufacturing or Retail Industries:

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

b) $50,000 \text{ Unit Sales Required} \times \$2.00 \text{ each Selling Price per Unit} = \$100,000 \text{ Sales Required for Break-Even}$

Example for Service Industries:

a) $\frac{(A + B + C)}{\text{Profit/Unit}} = \text{Unit Sales Required}$
 $\frac{\$50,000}{\$15.50/\text{Hour}} = 3226 \text{ Hours (Unit Sales Required)}$

b) $3226 \text{ Hours (Unit Sales Required)} \times \$45/\text{Hour} = \$145,170 \text{ Sales Revenue Required for B/E}$

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.

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 9 dealing with Costing-Pricing and page 12 dealing with Break-Even.

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

1. Selling Price Factor

$$\frac{\text{Selling Price } \$45.00}{\text{Cost/Hour of Service Labor } \$25.00 + \text{Cost of Sales Sales } \$4.50} = \text{Selling Price Factor } 1.5254$$

$$(\text{Cost/hour Service Labor } \$25.00 + \text{Cost of Sales } \$4.50) \times \text{Selling Price Factor } 1.5254 = \text{Selling Price } \$45.00$$

2. Break-Even Factor

$$\frac{\text{Sales Revenue required for Break-Even } \$145,170}{\text{administration/compensation (A) } + \text{fixed expenses (B) } + \text{variable expenses (C) } \$50,000} = \text{Break-Even Factor } 2.9034$$

$$A + B + C \text{ } \$50,000 \times \text{Break-Even Factor } 2.9034 = \text{Sales Revenue Required for Break-Even } \$145,170$$

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

$$\frac{\text{Sales Revenue required for Break-Even } \$145,170}{\text{(A + B + C) Operating Expenses } \$50,000} = \$2.91$$

Determining Cash Required for Start-Up

Example for Service Industry:

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

$$\frac{(A + B + C)}{\text{Profit/Unit}} = \text{Unit Sales Required}$$

$$\frac{\$50,000}{\$15.50/\text{Hour}} = 3226 \text{ Hours}$$

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

$$3226 \text{ Hours} \times \$45/\text{Hour} = \$145,170$$

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

Late Payment Reserve	1 month	2 months	3 months
	\$12,098	\$24,195	\$36,293

(key money) Startup Capital may include:

- | | | |
|--|---|-------------------|
| a) 1 month's rent and security | } | Estimate \$15,000 |
| b) minimum insurance premium | | |
| c) energy deposit plus 1 month's service cost | | |
| d) telephone deposit plus 1 month's service cost | | |
| e) office equipment | | |
| f) office supplies | | |

3 month's late payment reserve \$36,293
\$51,293

Projected Annual Sales Revenue Required for Break-even	=	Daily Revenue Required for Break-Even per Working Day
Annual Number of Working Days		
<u>\$145,170</u> 250 working days in 12 mo.	=	\$581 per working day

Note 1: loan schedule 5years D - monthly payment \$1.091
 principal \$51,293 (A + B + C) + D annual total = \$63,095
 interest rate 10% \$50,000 \$13,095

$$\frac{A + B + C + D}{\text{Profit/Unit}} = \text{Sales Units Required for Break-even}$$

$$\frac{\$63,095}{\$15.50/\text{hr}} = 4071 \text{ hrs}$$

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

$$4071 \text{ hrs} \times \$45.00/\text{Hr} = \frac{\$183,180}{250/\text{days}} = \$733/\text{day}$$

Determining Purchase Price 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 9, dealing with costing- pricing and and page 12, the Break-Even.

Step 2. Follow through with applying the Break-Even formula on page 14 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.

	Unit Sales Required For <u>Break-Even</u>	Selling Price <u>Per Hour</u>		Sales Revenue Required For <u>Break-Even</u>
Example: A + B + C + D + E				
\$15,000 \$35,000+ \$13,095 + \$22,203				
\$15.50/hour profit per unit	= 5504 hrs.	x \$45.00/hr.	=	\$247,680

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

$$\begin{array}{rclcl} \text{Current 12 month's compensation} & \times & \text{earnings multiplier} & = & \text{Selling Price} \\ \$70,298 & & 4 & = & \$281,192 \end{array}$$

Summary Review

Costing – Pricing formula provides:

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

Example:

$$\begin{array}{rcccl} \$1.00 & & 50\% & & \$.50 \\ \text{Cost of Product per Unit} & \times & \text{Suggested Profit Margin \%} & = & \text{Profit per Unit Cost} \end{array}$$

$$\begin{array}{rcccl} \$1.00 & & \$.50 & & \$1.50 \\ \text{Cost of Product per Unit} & + & \text{Profit per Unit} & = & \text{Selling Price per Unit} \end{array}$$

$$\begin{array}{rcccl} \$.50 & & \$1.50 & & 33 \frac{1}{3}\% \\ \text{Profit per Unit Cost} & + & \text{Selling Price per Unit} & = & \text{Profit Margin Percentile (\%)} \text{ per Unit Selling Price} \end{array}$$

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

$$\frac{(A + B + C)}{\text{Profit per unit in dollars or cents}} = \text{Unit Sales required for Break-Even}$$

$$\text{Unit Sales required for Break-Even} \times \text{Selling price per unit} = \text{Sales revenue required for Break-Even}$$

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).

Costing-Pricing Example

Cost Worksheet

6-12-04

Drinking Bottle

Material

Labor

Bottle	.10
Cover	.05
Washer	.01
Vent Piece	.01
Mouth Piece	.02
Straw	.01
Carton (36pk-.72)	.02
(Freight is not included, everything delivered)	
Total	.22



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

assembly including carton, packaging/sealed 3 min.

Total 3 minutes

$$C \times PM\% = P$$

$$.80 \times 50\% = .40$$

$$\text{total minutes} \times C/\text{min}$$

$$3 \times .13333 = .40$$

$$C + P = SP$$

$$.80 + .40 = \$1.20$$

1. material	.22
2. labor	.40
3. total C of Mat/labor	.62

$$\frac{P}{C} \frac{.40}{.80} = 50\% \text{ PM on Cost}$$

4. total C of Mat/lab	
x shrinkage rate (10%)	.06

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

5. suggested SP (\$1.20)	
x comm. Rate 10%	.12

$$\frac{SP}{C} \frac{1.20}{.80} = 1.5 \text{ SP Factor}$$

6. total C lines (3-4-5)	.80
7. total C x PM% =	P
.80 x 50% =	.40
8. C + P =	SP
.80 + .40 =	\$1.20

$$\text{Proof: } C \times \text{SP Factor} = SP$$

$$.80 \times 1.5 = \$1.20$$

Break-Even Example

1.

$\$50,000$		Total Sales Units Required for B/E		SP		Total Sales Required for B/E
$\frac{A + B + C}{\text{Profit/unit}}$	=	125,000/units	x	\$1.20		$\underline{\$150,000} = \$600/\text{day}$ 250 days
.40						

Total Sales Required for B/E					
$\frac{\$150,000}{A + B + C}$	=	\$3.00			Additional Sales Required for each additional dollar of expense
\$50,000					

Cost of mould \$20,000		D (Pr, I)
\$20,000 loan for 5 yrs @ 10% interest	=	\$5106

D		Additional sales Required for ea. additional dollar of expenses			Total additional Sales required for B/E
\$5106	x	\$3.00		=	\$15,318

2.

		Total Unit Sales Required for B/E		SP		Total Sales Required for B/E
$A + B + C + D$		137,765/Units	x	\$1.20	=	$\underline{\$165,318} = \$662/\text{day}$ 250 days
$\frac{\$50,000 + \$5106}{\text{Profit/Unit} - .40}$						

Adding cost of shrinkage increases the amount of additional sales required for B/E.

Total Sales Required for B/E		PM% on SP			Profit
\$150,000	x	33 1/3%		=	\$50,000

Total Sales Required for B/E		- Profit			Cost
\$150,000		\$50,000		=	\$100,000

Cost		Shrinkage%			Total Dollar Shrinkage
\$100,000	x	10%		=	\$10,000

Shrinkage		Additional Sales Required for each additional dollar of expense			Additional Sales Required for B/E
\$10,000	x	\$3.00		=	\$30,000

3.

Total Sales Required for B/E		+ Additional Sales Required for B/E			Total Sales Required for B/E
\$165,318		\$30,000		=	$\underline{\$195,318} = \$782/\text{day}$ 250 days

Costing-Pricing Worksheet for Manufacturing

Cost Worksheet

Dated

Model # or description

Material

Hourly cost of labor including
Add-ons per/minute

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. <u>Carton</u> 8. <u>Freight in</u>	description of assembly or operation _____ minutes _____ min _____ min _____ min _____ min _____ min assembly of ctn, pkg, sealing _____ min total minutes _____ min	_____ _____ _____ _____ _____ _____ _____ _____
Total _____	total minutes x cost/min _____	

Cost x 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 x SP Factor = SP

1. Material _____
2. Labor _____
3. Total cost of material/labor _____
4. Total cost of material/labor
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 _____

Cost-Pricing Worksheet for A Service

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

$$\text{Cost} \times \text{PM\%} = P$$

$$C + P = SP$$

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

$$\frac{P}{SP} = \text{PM\% on SP}$$

$$\frac{SP}{C} = \text{SP Factor}$$

$$\text{Proof: } C \times \text{SP Factor} = SP$$

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.

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

Sales Projection:

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

$$\frac{\text{Total Sales Required for B/E}}{A + B + C + D} = \text{Additional Sales Dollars Required for each Additional dollar of expense}$$

Glossary

PM%	Profit Margin Percentile
C	Cost/Unit
P	Profit/Unit
SP	Selling Price/Unit
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
SPF	Selling Price Factor

Ratios

Cost (C) x Profit Margin Percentile (PM%) = (P) Profit in dollars or cents

C + P = (SP) Selling Price

$\frac{P}{C}$ = PM% on Cost

$\frac{P}{SP}$ = PM% on Selling Price

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

A + B + C + D = Gross Profit Required for B/E

$\frac{A + B + C + D}{\text{Profit/Unit}}$ = Sales Units Required for B/E

$\frac{\text{Sales Units Required for B/E} \times \text{SP/Unit}}{\text{Annual Work days}}$ = Projected daily sales required for B/E

$\frac{\text{Sales Revenue Required for B/E}}{A + B + C + D}$ = Additional sales required for each additional dollar of expense

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. The first test is whether you can sell your product.
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. 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.
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. Think like a banker.
63. If someone fails, we all lose; if someone succeeds, we all benefit in this nation.
64. The reward is knowing that everyone in our country benefits when you are successful.

Internal Revenue Service Publications

Telephone: 1-800-829-1040

Pub.	Title:
334	Tax Guide for Small Business
509	Tax Calendar
533	Self Employment Tax
534	Depreciation
535	Business Expenses
536	Net Operating Loss
538	Accounting Period Methods
541	Tax Information on Partnerships
542	Tax Information on Corporations
550	Investment Income & Expenses
552	Record Keeping for Individuals
583	Taxpayer Starting Business
587	Business Use of Your House
910	Guide to Free Tax Services
911	Tax Information for Direct Selling
917	Business Use of a Car
937	Business Reporting Employment Taxes