

# **WIBO**

# **Break Even Analysis**

# **Primer**

The Workshop in Business  
Opportunities (WIBO)

Tel: 212-684-0854

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# What is break even?

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- The amount of sales, costs and price at which there is neither a loss nor a gain in business.

Another way to put it is:

**Break-Even is the volume where all fixed expenses are covered.**

- The key to Break Even is **PRICE**. You must ask the question...

**At what price will I break even? Make a profit?**

# Why is Break Even Important?

- “Rita”, a WIBO graduate, has a business making pillows, bed coverings and linens.
- A famous business woman became interested in the products and, over time, they struck up a deal to sell pillows in a famous catalog.
- Rita sold the pillows for \$60 to this famous person’s business.
- However, after doing Break Even with the help of a WIBO consultant, Rita discovered it cost her \$54 to manufacture each pillow.
- Rita’s gross profit was \$6.00 or 10% of the selling price.
- 10% of the selling price will go to paying for overhead or indirect costs or fixed costs.
- Since she did not perform a Break Even Analysis, Rita was surprised to see that she was actually losing money.
- Offering the pillows at the low \$60 price, Rita is only covering her direct cost and barely covering her indirect cost.

# What are direct costs or costs of good sold?

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- Direct costs are costs that rise or fall in direct proportion with sales or costs **directly** related to the sale, manufacture, or provision of the product or service.

If sales go up by 10%,  
then direct costs go up by 10%.

If sales go down by 10%,  
then direct costs go down by 10%.

# Lee's Shoe Shop - DIRECT COSTS

✓ Wholesale price of shoe	\$7.34
✓ Delivery/Shipping/Sales Commission (2%)	\$.34
✓ Delivery/Shipping (2%)	\$.34
✓ Other (Specify) ie., Shoe box	\$1.10
✓ Shoe brush (Free Gift)	\$1.00

**TOTAL DIRECT COSTS/**per unit (one pair of shoes)

**\$10.12**

Note: Direct costs are going to vary from businesses to business; very industry specific.

# Sample Direct Costs

## YUM YUM BAKERS ONE 8 INCH LOAF OF CAKE

<i>TYPE OF DIRECT COSTS Materials/Merchandise</i>	<i>COST PER UNIT \$</i>
Flour, baking products	0.16
Sugar, Salt	0.13
Milk	0.20
Eggs (2 eggs per loaf, .05¢ each, .60¢ per dozen, bulk price) $.060 / 12 = 0.5 \times 2 = 10$	0.10
Butter	0.25
Spices, extracts, nuts	0.21
* Labor 1hr@\$20 for 100 cakes ( $\$20 \div 100 = 0.20$ )	0.20
Packing & Labeling	0.10
Gas for oven	0.03
<b>TOTAL DIRECT COSTS/per cake</b>	<b>1.38</b>

\* LABOR is a very important cost that MUST BE figured into your calculations AND categorized properly.

# Sample Direct Costs

## ROLES CONSULTANTS 2 DAY WORKSHOP for 20 PEOPLE

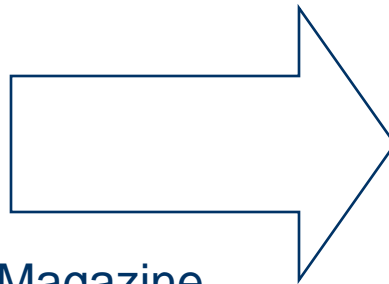
<i>TYPE OF DIRECT COSTS Materials/Merchandise</i>	<i>COST PER UNIT \$</i>
Printed Materials (Worksheets, Etc.)	100.00
20 Blank Videos (for taped role plays)	100.00
Research (20 person hrs. @ \$75 per hr)	1,500.00
Adapting Stock Materials (10 hrs @ \$75 per hr)	750.00
Preparing New Materials (10 hrs @ \$75 per hr)	750.00
* Conducting Classes 40 hrs @ \$75 per hr	3,000.00
Equipment rented solely for this workshop	225.00
<b>TOTAL MONTHLY DIRECT COSTS/per workshop</b>	<b>6,425.00</b>

\* LABOR is a very important cost that MUST BE figured into your calculations AND categorized properly.

# Determine the unit price

- One of the most important steps in determining the break-even point is correctly identifying a unit of sale.
- A unit of sale is a product or service that represents a typical or average sale in your business.

Restaurant  
General contractor  
Music teacher  
Dell Computer Corp.  
Martha Stewart Living Magazine



broiled salmon dinner  
one complete kitchen renewal  
one hour piano lesson  
one Dell Dimension Desktop  
one new advertiser



# Indirect or fixed costs

- Definition: The costs you must cover whether you make a sale or not.
- Otherwise put, these are non-negotiable expenses. You can negotiate the *amount* but not whether you can pay it or not.
- Examples of indirect costs\*:
  - ✓ Rent
  - ✓ Utilities
  - ✓ Telephone
  - ✓ Legal and Accounting
  - ✓ Insurance
  - ✓ Loan payments
  - ✓ Labor
  - ✓ Office equipment
  - ✓ Postal services

\* Note: Indirect costs are general operating costs typical to most businesses. These costs are typically calculated on a monthly basis.

# Lee's Shoe Shop - INDIRECT COSTS

✓ Rent	\$763.00	✓ Window washing	\$7.00
✓ Owner's salary	\$2,500.00	✓ Insurance	\$50.00
✓ Fringe benefits	\$500.00	✓ Stationery	\$2.50
✓ Utilities	\$111.00	✓ Office supplies	\$5.17
✓ Telephone	\$33.00	✓ Sales promotion	\$90.00
✓ Cleaning	\$8.00	✓ Travel & trade	\$76.00
✓ Postage	\$6.83	✓ Legal and accounting	<u>\$100.00</u>

**TOTAL MONTHLY INDIRECT COSTS**

**\$4,250.00**

# What is gross profit or markup?

- The profit you make before covering your indirect costs or fixed costs.

## Lee's Shoe Shop

For example:

	Per Month	%
Income from Shoe Sales	\$12,500	100%
* Direct costs/cost of goods sold	\$7,500	60%
Gross profits	\$5,000	40%

\* The Direct Cost for Lee's Shoe Shop is the buying of shoes from the wholesaler, manufacturer or designer.

# Sample Gross Profits

## High and Low profit margins

VL Graphic Design – 13 yrs experience, home based business

	Per Month	%
Income from Client Sales	\$5,000	100%
* Direct costs/cost of goods sold	\$1,250	25%
Gross profits	\$3,750	75%

Children's Books, Inc. – manufacturing of children's books

	Per Month	%
Income from Client Sales	\$5,000	100%
** Direct costs/cost of goods sold	\$4,750	95%
Gross profits	\$ 250	5%

\* The Direct Costs here are labor, office supplies and technology.

\*\* The Direct Costs here are all production items that go into making each book (paper, ink, machinery, etc.)

# Profit and Loss Statement (P&L)

		<i>Amount</i>	<i>% of Sales</i>
INCOME FROM SALES		\$12,500.00	100%
DIRECT COSTS (of Goods Sold)		<u>7,500.00</u>	<u>60%</u>
Gross Profit		5,000.00	40%
INDIRECT COSTS			
Rent	\$763.00		
Owner's salary	2,500.00		
Fringe benefits	500.00		
Utilities	111.00		
Telephone	33.00		
Cleaning	8.00		
Postage	6.83		
Window washing	7.00		
Insurance	50.00		
Office supplies	5.17		
Sales promotion	90.00		
Entertainment	41.00		
Travel & trade	35.00		
Legal and accounting	<u>100.00</u>		
TOTAL INDIRECT COSTS		<u>4,250.00</u>	
NET PROFIT (LOSS)		\$750.00	

# Steps to Break Even

PROFIT PLANNING GUIDE			
UNIT OF SALE		(1) One Pair of Shoes	
UNITS PER MONTH		(2) 630	
	<i>\$ Per Unit</i>	<i>\$ Per Month</i>	<i>%</i>
Sales/Price	(8)	(6)	(11) 100
Direct Costs	(3) <b>10.12</b>	(4)	(12)
Gross Profits	(9)	(10)	(13)
Indirect Costs		(5)	
Net Profits		(7)	

# Steps to Break Even

<b>PROFIT PLANNING GUIDE</b>			
Formula: Direct Costs per month: Direct Costs per Unit X Units per Month			
UNIT OF SALE		(1) One Pair of Shoes	
UNITS PER MONTH		(2) 630	
	<i>\$ Per Unit</i>	<i>\$ Per Month</i>	<i>%</i>
Sales/Price	(8)	(6)	(11) 100
Direct Costs	(3) 10.12	(4) 6,375	(12)
Gross Profits	(9)	(10)	(13)
Indirect Costs		(5) 4,250	
Net Profits		(7)	

# Steps to Break Even

<b>PROFIT PLANNING GUIDE</b>			
<u>Formula:</u> Sales at Break-even point = Direct Costs + Indirect Costs			
UNIT OF SALE		<sup>(1)</sup> One Pair of Shoes	
UNITS PER MONTH		<sup>(2)</sup> 630	
	<i>\$ Per Unit</i>	<i>\$ Per Month</i>	<i>%</i>
Sales/Price	<sup>(8)</sup>	<sup>(6)</sup> <b>10,625</b>	<sup>(11)</sup> 100
Direct Costs	<sup>(3)</sup> 10.12	<sup>(4)</sup> 6,375	<sup>(12)</sup>
Gross Profits	<sup>(9)</sup>	<sup>(10)</sup>	<sup>(13)</sup>
Indirect Costs		<sup>(5)</sup> 4,250	
Net Profits		<sup>(7)</sup> 0	



# Finished! You now know the price that Lee has to charge to Break Even

<b>PROFIT PLANNING GUIDE</b>			
<u>Formula:</u> Unit Price = Sales Per Month ÷ Units Per Month			
UNIT OF SALE		<sup>(1)</sup> One Pair of Shoes	
UNITS PER MONTH		<sup>(2)</sup> 630	
	<i>\$ Per Unit</i>	<i>\$ Per Month</i>	<i>%</i>
Sales/Price	<sup>(8)</sup> <b>16.86</b>	<sup>(6)</sup> 10,625	<sup>(11)</sup> 100
Direct Costs	<sup>(3)</sup> 10.12	<sup>(4)</sup> 6,375	<sup>(12)</sup> 60
Gross Profits	<sup>(9)</sup> <b>6.74</b>	<sup>(10)</sup> 4,250	<sup>(13)</sup> 40
Indirect Costs		<sup>(5)</sup> 4,250	
Net Profits		<sup>(7)</sup> 0	

- Net profit is zero.
- Determine your unit price. This is very important!
- Gross Profit per unit = Sales price – Direct Costs per unit
- Gross Profit per month = Unit GP X Units per month
- Determine percentage break-down between Direct Costs & Gross Profits

# FAQs...

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Q: How do I handle the different products and services within my business?

A: Perform a Break-Even Analysis for **EACH** of all the services/products you sell/produce.

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Q: How does a Break-Even Analysis make my business more productive?

A: If you know the BE for different items/services, you can make better financial decisions. i.e., if a catering company had to choose between 2 jobs, a Corporate Event or a Bridal Event, and they knew that the Bridal Event yielded a bigger profit, then they would make the smarter choice of producing the Bridal Event if the company could not do both due to time or space limitations.

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Q: If I've never had any sales, how do I know how to price?

A: - Research Competitors

- Look up pricing in your Trade Journals/visit trade shows

- Sell something to see how fast (price too low) / slow (price too high)

Example: Palm Tungsten E Handheld \$199.00 for 2 years – Demand Meets Supply!

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Q: When needed, how do I cut costs?

A: Start with indirect costs to see where you can reduce or eliminate.

- Cancel magazine publications → use library for free

- Reduce marketing expenses → use more cost-efficient email marketing

Caution: Avoid cutting your direct costs, as it might affect your quality.

# Status Quo: Current Costs, Prices and Profits

Harriet Peter's Painters			
PROFIT PLANNING GUIDE			
UNIT OF SALE		18' x 15' room, 2 coats	
UNITS PER MONTH		<b>88</b>	
	\$ Per Unit	\$ Per Month	%
Sales/Price	<b>150.00</b>	13,200.00	100
Direct Costs	135.12	11,890.56	90.1
Gross Profits	14.88	1,309.44	9.9
Indirect Costs		1,141.00	
Net Profits		<b>168.44</b>	

# Alternative A

Harriet Peter's Painters			
PROFIT PLANNING GUIDE			
UNIT OF SALE		18' x 15' room, 2 coats	
UNITS PER MONTH		88	
	\$ Per Unit	\$ Per Month	%
Sales/Price	<b>180.00</b>	15,840.00	100
Direct Costs	135.12	11,890.56	75.1
Gross Profits	44.88	3,949.44	24.9
Indirect Costs		<b>1,141.00</b>	
Net Profits		<b>2,808.44</b>	

- ✓ Raises unit price from \$150 to \$180
- ✓ Indirect costs stay the same
- ✓ Increases net profit by 1,567%

Note: Raising the price is fine **IF** her current customers are ok with the increase. If not...she will have to target a different market/new customers.

# Alternative B

Harriet Peter's Painters			
PROFIT PLANNING GUIDE			
UNIT OF SALE		18' x 15' room, 2 coats	
UNITS PER MONTH		<b>154</b>	
	\$ Per Unit	\$ Per Month	%
Sales/Price	<b>150.00</b>	23,100.00	100
Direct Costs	124.98	19,264.92	83.3
Gross Profits	25.02	3,853.08	16.7
Indirect Costs		<b>1,880.00</b>	
Net Profits		<b>1,973.08</b>	

- ✓ Keeps Status Quo price
- ✓ Increases units per month – 66 more rooms or 75%
- ✓ Increases indirect costs – by 37%
- ✓ Increases net profit by 1,215%

# Alternative C

Harriet Peter's Painters			
PROFIT PLANNING GUIDE			
UNIT OF SALE		18' x 15' room, 2 coats	
UNITS PER MONTH		<b>154</b>	
	\$ Per Unit	\$ Per Month	%
Sales/Price	<b>180.00</b>	27,720.00	100
Direct Costs	124.98	19,246.92	69.4
Gross Profits	55.02	8,473.08	30.6
Indirect Costs		<b>1,880.00</b>	
Net Profits		<b>6,593.08</b>	

- ✓ Increases price – by 20% from Status Quo
- ✓ Increases units per month – 66 more rooms or 75% per month
- ✓ Keeps units per month same as Status Quo
- ✓ Increase indirect costs from Status Quo by 37%
- ✓ Increases net profit by 3,827%

# Direct Costs Per Month

	STATUS QUO/ ALTERNATIVE A	ALTERNATIVES B & C
Paint, 2 gallons @\$35	\$70.00	\$70.00
Roller covers, masking tape, brush cleaners, etc.	15.00	15.00
Labor		
✓ 2 person/hours @ \$20	40.00	
Employer/employee share FICA	6.12	
✓ 1 person/hour @ \$20		20.00
Employer/employee share FICA		3.06
✓ 1 person/hour @ \$12		12.00
Employer contribution FICA		.92
Keough Pension Plan contribution	4.00	4.00
<b>TOTAL DIRECT COSTS</b>	\$135.12	\$124.98

# Indirect Costs Per Month

	STATUS QUO/ ALTERNATIVE A	ALTERNATIVES B & C
Rent for space in home used exclusively for office and storage	\$125.00	\$125.00
Depreciation:		
Computer, calculator, ladders, tools	50.00	50.00
Van, part-time use	250.00	250.00
10% of owner's salary* for selling, estimating and administration	400.00	400.00
<b>10% of owner's salary* for training and supervising</b>		400.00
Fringes on above		
<b>15.3% (employer &amp; employee share) on FICA</b>	61.20	119.20
<b>10% contribution to Keough Pension Plan</b>	40.00	80.00
<b>Bookkeeping/ Accounting Fees</b>	50.00	60.00
Legal Fees	25.00	25.00
<b>Overalls, safety shoes, etc.</b>	20.00	40.00
Telephone	40.00	40.00
Commercial plates on van	5.80	5.80
Insurance	20.00	20.00
<b>Workers' Comp, Disability, Unemployment</b>		200.00
<b>Office and shop supplies</b>	4.00	5.00
Contingencies (Costs you did not foresee)	50.00	60.00
<b>TOTAL INDIRECT COSTS</b>	<b>\$1,141.00</b>	<b>\$1,880.00</b>



# WIBO Contacts

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- [www.WIBO.org](http://www.WIBO.org)
- Tel: 212-684-0854

## Class Locations:

**Central Brooklyn** (Franklin Avenue)

**Downtown Brooklyn** (Atlantic Avenue)

**Harlem** (125<sup>th</sup> Street)

**Midtown I and II** (Gramercy Park)

**St. Albans** (Jamaica, Queens)

**South Bronx** (149<sup>th</sup> Street, Grand Concourse)

**Washington Heights** (168<sup>th</sup> Street)