PROFITABILITY FRAMEWORK

```
Profits
├── Revenue
│    ├── Revenue/Unit
│    └── # Units Sold
└── Cost
     ├── Cost/Unit
     │    ├── Fixed Cost
     │    └── Variable Cost
     └── # Units Sold
```
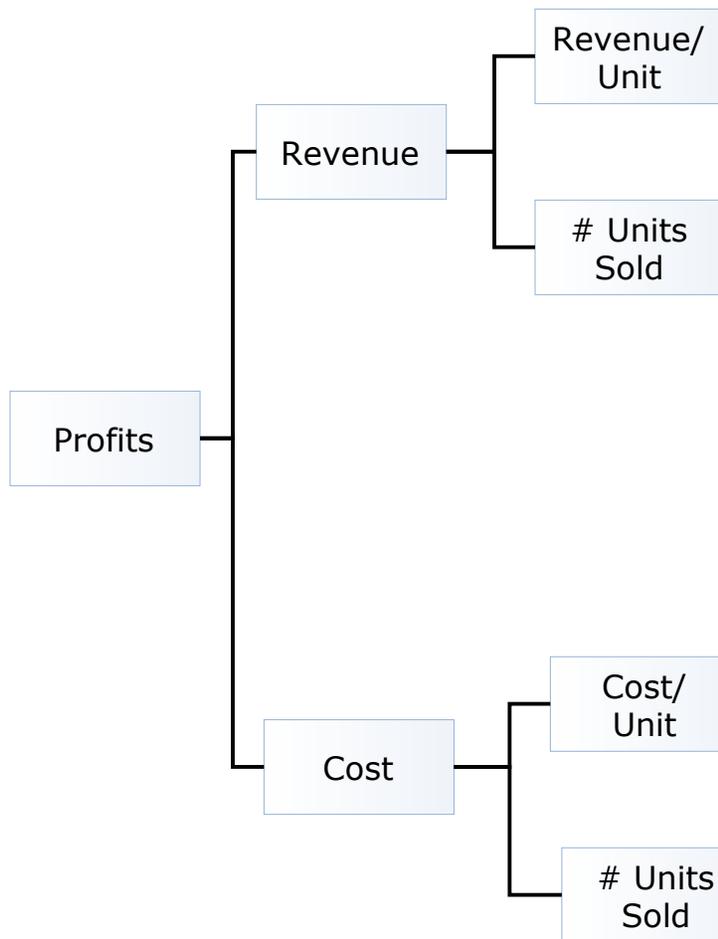
For the problem branch (e.g., Revenue/Unit or # Units Sold)
1) SEGMENT the number, break it up into its component parts, compare to historical metrics to find where the shift is coming from
2) ISOLATE the key driver causing bulk of problem
3) EXPLORE possible resolutions

Possible Segments to get data for, isolate & explore:
* By product / product line
* By distribution channel
* By region
* By customer type (new/old, big/small)
* By industry vertical

Once you know mathematically what's causing the problem, you need to understand WHY the number has declined in the context of the marketplace. This may be a "compound framework" problem requiring you to use a general market analysis framework. If so, most often you will want to start with the customer (demand side) analysis and potentially may have to use the entire framework.

For problem branch (e.g, fixed or variable cost)
SEGMENT into its component parts
* Segment cost by logical components
* Segment costs by value chain

Value Chain Example:

Identify fixed costs in each of the following:
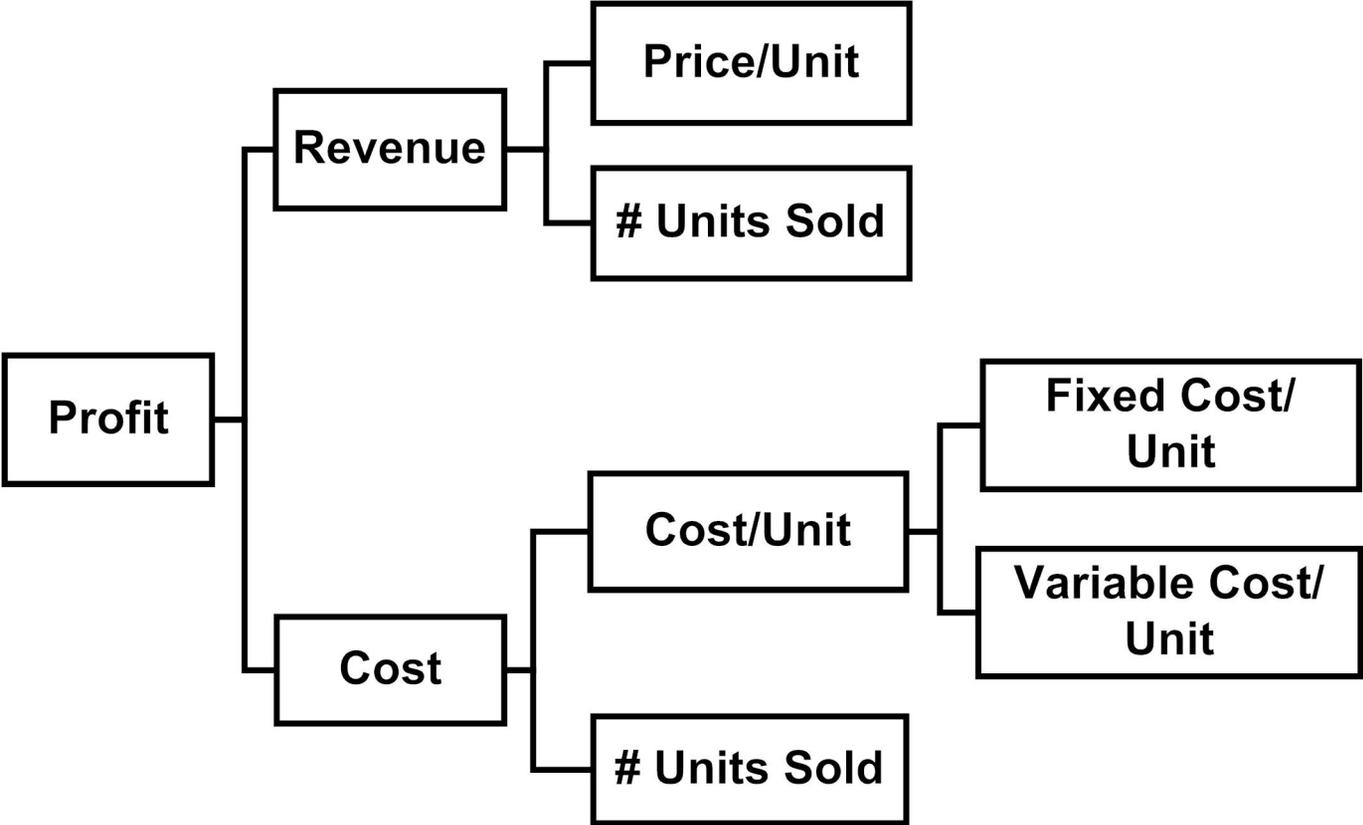Raw Materials -> Factory -> **Distribution** ->Customers

Compare to historical. Find the problem component.

Keep "drilling down" by finding the problem segment, and drill down on THAT segment until you ISOLATE what's mathematically causing the majority of the problem (aka. Find the LEVERAGE point)

**Tips:**
1) Keep drilling down until you isolate the problem
2) If you realize a branch (or sub-branch) is NOT the problem come up a level and work the remaining branches
3) The name of the game is PROBLEM ISOLATION
4) When "units sold" decline, it's useful to compare the company's numbers to its competitors to determine if it's an industry-wide or company-specific issue

CASE INTERVIEW SECRETS BOOK PROFITABILITY FRAMEWORK

```
                                      ┌──────────────────┐
                                    ┌─│   Price/Unit     │
                  ┌───────────┐     │ └──────────────────┘
                ┌─│  Revenue  │─────┤
                │ └───────────┘     │ ┌──────────────────┐
                │                   └─│  # Units Sold    │
┌───────────┐   │                     └──────────────────┘
│  Profit   │───┤
└───────────┘   │                                        ┌──────────────────┐
                │                                      ┌─│  Fixed Cost/Unit │
                │                   ┌───────────┐      │ └──────────────────┘
                │                 ┌─│ Cost/Unit │──────┤
                │ ┌───────────┐   │ └───────────┘      │ ┌──────────────────┐
                └─│   Cost    │───┤                    └─│Variable Cost/Unit│
                  └───────────┘   │                      └──────────────────┘
                                  │ ┌──────────────────┐
                                  └─│  # Units Sold    │
                                    └──────────────────┘
```

Cost-Volume-Profit Analysis

CVP Graph
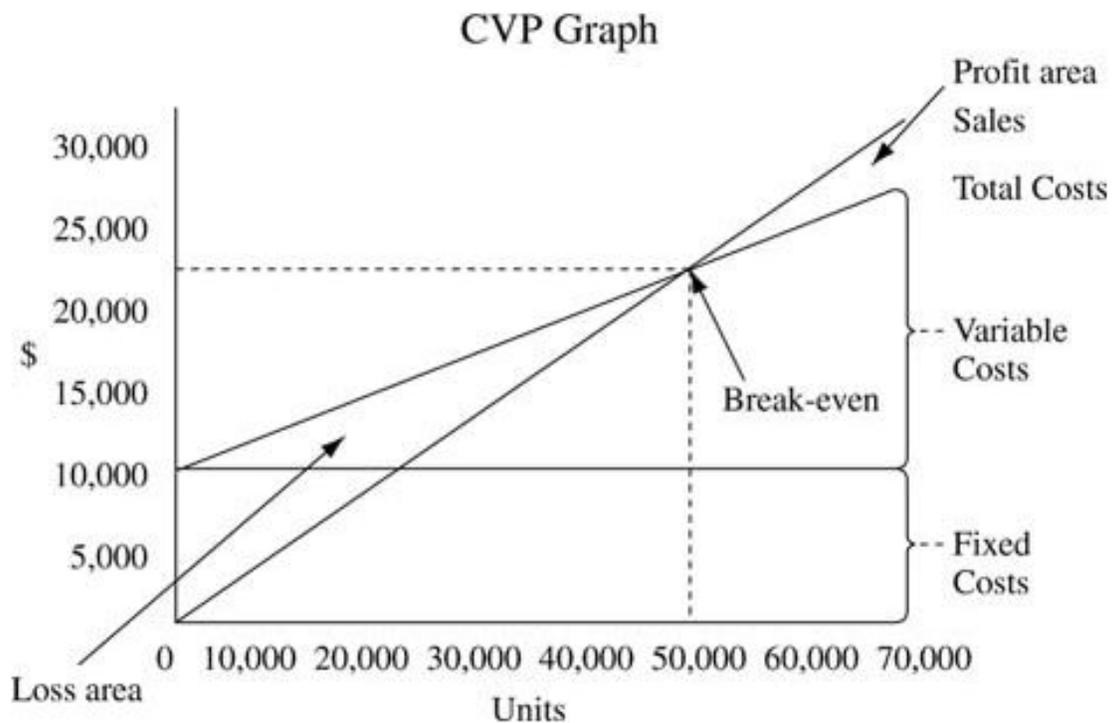
$$Profit = Quantity\ x\ (Price - Variable\ Cost) -\ Fixed\ Cost$$
$$Profit = Q\ x\ (P - VC) - FC$$

$$Break - even\ point\ (units) = \frac{FC}{(P - VC)}$$

Before, after and change table

Whenever you're comparing the past with the present, or present with the future, create a simple table to keep track of the numbers.

Good piece of advice; keep table for results on one page, and do calculation on the other!

Example; How will the introduction of a new product impact the firm

Product	Before	After	Delta
Old product	$15.25M	$9.5 M	-$5.75M
New product	0	$8.75M	+$8.75M
Net			**+$3M**