

Markup  
Slang for unit profit as a percentage  
of the selling price.  
The Short Lecture

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Why do I have to learn this stuff?

- 1) It is on the exam
- 2) It is used a lot as a measure of efficiency
- 3) It is used as a simple way for retailers to set their selling price based on the invoice cost

10 Uses of Markup Formula

- 1 The calculation of Breakeven Revenue,  $R^*$
- 2 Setting Target Markup when retailers negotiate with manufacturers regarding the necessary discount off list
- 3 Setting a price using Markup pricing
- 4 Estimating the change in quantity needed to maintain the current total contribution given a change in price.

10 Uses of Markup Formula

- 5 Determining the optimal stocking rule (V/P is often used here as it is more convenient to write)
- 6 Calculating the Breakeven or Lowest Possible Discount Price (markup on cost is more convenient here)
- 7 Channel Efficiency (V/P is more convenient to write)
- 8 Store Markdowns and Add-Ons (V/P is more convenient to write)

10 Uses of Markup Formula

- 9 Calculating the price that maximizes profit  
 $OPM = 1/Mp + |Eqpl$
- 10 Comparing brands and allocating budgets between them using the Marketing Identity  
 $MROS = ROME \times \text{Spending rate} \times \text{Markup}$

Three Calculations You have to do

- Markup on Price **is the crucial one!!!!**
- Markup on Cost
- Converting from cost to price

- Markup on price,  $M_p$ , is defined as
- The dollar markup  $(P-V)$  divided by the selling price,  $P$
- $M_p = (P-V)/P$
- Markup on cost,  $M_v$  is defined as the dollar markup  $(P-V)$  divided by the variable cost per unit,  $V$
- $M_v = (P-V)/V$

### Finding The Markup on Selling Price

- If you have a selling price of  $P = \$5$  per wagon and you have a variable cost of  $V = \$2$  per wagon
- What is your markup on price?
- $M_p = (P-V)/P = (5-2)/5 = 3/5 = 60\%$
- You are 60% efficient in converting revenues into profits!

### Finding the Necessary Price

- You have bought a wagon for a cost of \$2.
- To make a fair and normal profit you must sell it with a 60% markup on price
- What is the selling price you must set on it.
- $M_p = (P-V)/P$
- $60\% = (P-2)/P$
- Solve for  $P$
- in general  $P = V/(1-M_p)$
- $P = \$2/(1-0.60) = \$5$

### The Algebra

- $(P-V)/P = M_p$  This is by definition
- $P-V = (M_p)P$
- $P = (M_p)P + V$
- $P - MP(P) = V$
- $P(1-M_p) = V$
- $P = V/(1-M_p)$
- Or
- Selling Price = the Variable cost per unit on invoice cost,  $V$ , divided by  $(1 - \text{the markup on price})$

### Going from Markup on Cost to Markup on Price

- The most common problem is from cost to price
- Convert 25% **markup on cost** to a 20% markup on price
- Step 1: Write the percentage as a Fraction
- $25\% = 25/100$
- Step 2: **Add** the top part to the bottom part
- $25/(100+25) = 25/125 = 1/5 = 20\%$

### Going Backwards From Price to Cost

- Convert 20% **markup on price** to a 25% markup on cost
- Step 1: Write the percentage as a Fraction
- $20\% = 20/100$
- **Subtract** the top part from the bottom part
- $20/(100-20) = 20/80 = 25\%$

- Any questions?