

A WOMAN SOLD AN ARTICLE FOR 400.00 AND MADE A PROFIT OF 25%, FIND THE COST PRICE AND PROFIT

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UNDERSTANDING THE CONCEPTS OF COST PRICE, SELLING PRICE, AND PROFIT MARGINS IS ESSENTIAL FOR ANYONE INVOLVED IN BUYING AND SELLING GOODS. IN THIS ARTICLE, WE WILL EXPLORE A PRACTICAL EXAMPLE: A WOMAN SELLS AN ARTICLE FOR 400.00, MAKING A PROFIT OF 25%. OUR GOAL IS TO DETERMINE HER ORIGINAL COST PRICE AND UNDERSTAND HOW PROFIT CALCULATIONS WORK. THIS SCENARIO PROVIDES VALUABLE INSIGHTS INTO BASIC PROFIT AND LOSS CONCEPTS, WHICH ARE FUNDAMENTAL FOR SMALL BUSINESS OWNERS, STUDENTS, AND ANYONE INTERESTED IN COMMERCE.

INTRODUCTION TO PROFIT AND COST PRICE

BEFORE DELVING INTO THE SPECIFIC PROBLEM, LET'S CLARIFY SOME KEY TERMINOLOGY:

WHAT IS COST PRICE?

- THE ORIGINAL PRICE AT WHICH AN ITEM IS PURCHASED OR PRODUCED.
- IT INCLUDES THE PRODUCTION COST, PURCHASE PRICE, AND ANY ADDITIONAL EXPENSES INCURRED TO BRING THE PRODUCT TO A SELLABLE STATE.

WHAT IS SELLING PRICE?

- THE PRICE AT WHICH THE PRODUCT IS SOLD TO CUSTOMERS.
- IT INCLUDES THE PROFIT MARGIN OVER THE COST PRICE.

WHAT IS PROFIT?

- THE FINANCIAL GAIN ACHIEVED FROM SELLING AN ITEM.
- CALCULATED AS THE DIFFERENCE BETWEEN THE SELLING PRICE AND THE COST PRICE.

PROFIT PERCENTAGE

- EXPRESSED AS A PERCENTAGE OF THE COST PRICE.
- INDICATES HOW MUCH PROFIT IS MADE RELATIVE TO THE COST.

UNDERSTANDING THE GIVEN SCENARIO

THE PROBLEM STATES:

- THE ARTICLE IS SOLD FOR 400.00.
- THE PROFIT MADE IS 25%.

OUR TASK:

- FIND THE ORIGINAL COST PRICE.
- CONFIRM THE PROFIT IN MONETARY TERMS.

CALCULATING THE COST PRICE

TO DETERMINE THE COST PRICE, WE USE THE RELATIONSHIP BETWEEN SELLING PRICE, COST PRICE, AND PROFIT PERCENTAGE.

FORMULA FOR SELLING PRICE WITH PROFIT PERCENTAGE

$$\text{SELLING PRICE} = \text{COST PRICE} + \text{PROFIT}$$

OR, EXPRESSED AS:

$$\text{SELLING PRICE} = \text{COST PRICE} \times \left(1 + \frac{\text{PROFIT PERCENTAGE}}{100}\right)$$

GIVEN:

- SELLING PRICE $(SP = 400)$
- PROFIT PERCENTAGE $(P\% = 25\%)$

REARRANGED TO FIND COST PRICE:

$$\text{COST PRICE} = \frac{\text{SELLING PRICE}}{1 + \frac{\text{PROFIT PERCENTAGE}}{100}}$$

SUBSTITUTING THE KNOWN VALUES:

$$\text{COST PRICE} = \frac{400}{1 + \frac{25}{100}} = \frac{400}{1 + 0.25} = \frac{400}{1.25}$$

CALCULATING:

$$\text{COST PRICE} = 320$$

THEREFORE, THE ORIGINAL COST PRICE OF THE ARTICLE IS 320.00.

CALCULATING THE PROFIT

NOW, LET'S DETERMINE THE ACTUAL PROFIT MADE IN MONETARY TERMS.

PROFIT FORMULA

$$\text{PROFIT} = \text{SELLING PRICE} - \text{COST PRICE}$$

SUBSTITUTING THE VALUES:

$$\backslash[\\ \text{TEXT}\{\text{PROFIT}\} = 400 - 320 = 80 \\ \backslash]$$

THE PROFIT EARNED ON THE SALE IS 80.00.

SUMMARY OF KEY FINDINGS

- COST PRICE: 320.00
- SELLING PRICE: 400.00
- PROFIT AMOUNT: 80.00
- PROFIT PERCENTAGE: 25%

UNDERSTANDING THE CALCULATION PROCESS

THE CALCULATION INVOLVES A FEW STRAIGHTFORWARD STEPS:

1. RECOGNIZE THE PROFIT PERCENTAGE AND THE SELLING PRICE.
2. USE THE PROFIT PERCENTAGE TO FIND THE COST PRICE.
3. SUBTRACT THE COST PRICE FROM THE SELLING PRICE TO FIND THE PROFIT.

THIS METHOD IS UNIVERSALLY APPLICABLE IN BUSINESS SCENARIOS WHERE PROFIT MARGINS ARE KNOWN, BUT THE ORIGINAL COST OR SALE PRICE NEEDS TO BE DETERMINED.

PRACTICAL APPLICATIONS OF PROFIT CALCULATIONS

KNOWING HOW TO CALCULATE COST PRICE AND PROFIT PERCENTAGE HAS SEVERAL REAL-WORLD APPLICATIONS:

FOR SMALL BUSINESS OWNERS

- SETTING APPROPRIATE PRICES TO ENSURE A DESIRED PROFIT.
- ANALYZING SALES PERFORMANCE.
- MANAGING PROFIT MARGINS EFFECTIVELY.

FOR CONSUMERS AND INVESTORS

- UNDERSTANDING THE MARKUP ON GOODS.
- MAKING INFORMED PURCHASING DECISIONS.
- EVALUATING BUSINESS PROFITABILITY.

IN EDUCATIONAL SETTINGS

- BUILDING FOUNDATIONAL KNOWLEDGE OF BUSINESS MATHEMATICS.
- PREPARING FOR EXAMS RELATED TO COMMERCE AND FINANCE.

ADDITIONAL TIPS FOR PROFIT AND COST PRICE CALCULATIONS

- ALWAYS CONVERT PERCENTAGE PROFIT OR LOSS INTO DECIMAL FORM BEFORE CALCULATIONS.
- REMEMBER THAT PROFIT PERCENTAGE IS BASED ON THE COST PRICE, NOT THE SELLING PRICE.
- USE THE FORMULA:

$$\text{Cost Price} = \frac{\text{Selling Price}}{1 + \frac{\text{Profit Percentage}}{100}}$$

FOR PROFIT CALCULATIONS.

- FOR LOSS SCENARIOS, REPLACE PROFIT WITH LOSS IN THE FORMULAS ACCORDINGLY.

CONCLUSION

IN THIS DETAILED EXPLORATION, WE'VE DEMONSTRATED HOW TO DETERMINE THE COST PRICE AND PROFIT FROM A GIVEN SELLING PRICE AND PROFIT PERCENTAGE, USING THE EXAMPLE OF A WOMAN SELLING AN ARTICLE FOR 400.00 WITH A 25% PROFIT. THE KEY TAKEAWAYS INCLUDE:

- THE ORIGINAL COST PRICE IS 320.00.
- THE PROFIT MADE IS 80.00.
- THE PROFIT PERCENTAGE IS CONFIRMED AT 25%.

MASTERING THESE CALCULATIONS IS VITAL FOR EFFECTIVE FINANCIAL MANAGEMENT, PRICING STRATEGIES, AND UNDERSTANDING BUSINESS PROFITABILITY. WHETHER YOU'RE A BUDDING ENTREPRENEUR OR A STUDENT, GRASPING THESE FUNDAMENTAL CONCEPTS WILL SERVE AS A SOLID FOUNDATION FOR MORE ADVANCED FINANCIAL ANALYSIS.

KEYWORDS FOR SEO OPTIMIZATION:

- PROFIT CALCULATION
- COST PRICE
- SELLING PRICE
- PROFIT PERCENTAGE
- BUSINESS MATHEMATICS
- PROFIT AND LOSS
- PRICE CALCULATION EXAMPLE
- HOW TO CALCULATE PROFIT
- BUSINESS PROFIT MARGIN
- FINANCIAL LITERACY

FREQUENTLY ASKED QUESTIONS

A WOMAN SOLD AN ARTICLE FOR 400.00 AND MADE A PROFIT OF 25%. WHAT IS THE COST PRICE OF THE ARTICLE?

THE COST PRICE IS 320.00. (SINCE PROFIT IS 25%, $\text{Cost Price} = \text{Selling Price} / (1 + \text{Profit Percentage}) = 400 / 1.25 = 320$)

IF AN ARTICLE IS SOLD FOR 400.00 WITH A 25% PROFIT, HOW MUCH PROFIT DID THE WOMAN EARN?

THE PROFIT EARNED IS 80.00. ($\text{Profit} = \text{Selling Price} - \text{Cost Price} = 400 - 320 = 80$)

HOW DO YOU CALCULATE THE COST PRICE OF AN ARTICLE WHEN THE SELLING PRICE AND PROFIT PERCENTAGE ARE KNOWN?

$\text{Cost Price} = \text{Selling Price} / (1 + \text{Profit Percentage})$. FOR EXAMPLE, WITH A SELLING PRICE OF 400 AND PROFIT OF 25%, $\text{Cost Price} = 400 / 1.25 = 320$.

WHAT IS THE SIGNIFICANCE OF KNOWING BOTH THE SELLING PRICE AND PROFIT PERCENTAGE IN CALCULATING COST PRICE?

KNOWING BOTH ALLOWS YOU TO ACCURATELY DETERMINE THE ORIGINAL COST PRICE, WHICH IS ESSENTIAL FOR PROFIT ANALYSIS AND PRICING STRATEGIES.

IF THE PROFIT PERCENTAGE CHANGES, HOW DOES IT AFFECT THE CALCULATION OF THE COST PRICE WHEN SELLING PRICE REMAINS THE SAME?

AN INCREASE IN PROFIT PERCENTAGE INCREASES THE CALCULATED COST PRICE WHEN THE SELLING PRICE IS FIXED, AND VICE VERSA. THE FORMULA REMAINS $\text{Cost Price} = \text{Selling Price} / (1 + \text{Profit Percentage})$.

ADDITIONAL RESOURCES

PROFIT ANALYSIS AND COST PRICE CALCULATION: A DEEP DIVE INTO THE SALE OF AN ARTICLE

UNDERSTANDING THE INTRICACIES OF PROFIT AND COST PRICE CALCULATIONS IS ESSENTIAL FOR BOTH BUDDING ENTREPRENEURS AND SEASONED BUSINESS PROFESSIONALS. IN THIS ARTICLE, WE EXPLORE A REAL-WORLD SCENARIO: A WOMAN SELLS AN ARTICLE FOR \$400 AND MAKES A PROFIT OF 25%. WE WILL METICULOUSLY ANALYZE THE PROBLEM, DERIVE THE COST PRICE, AND DISCUSS THE SIGNIFICANCE OF PROFIT MARGINS IN BUSINESS OPERATIONS. THIS COMPREHENSIVE GUIDE AIMS TO CLARIFY THE UNDERLYING CONCEPTS AND DEMONSTRATE STEP-BY-STEP CALCULATIONS, MAKING IT INVALUABLE FOR LEARNERS AND PRACTITIONERS ALIKE.

UNDERSTANDING THE SCENARIO: SELLING PRICE, PROFIT, AND COST PRICE

BEFORE DIVING INTO CALCULATIONS, IT'S CRUCIAL TO COMPREHEND THE FUNDAMENTAL TERMS INVOLVED:

- SELLING PRICE (SP): THE AMOUNT AT WHICH AN ITEM IS SOLD TO THE CUSTOMER.
- COST PRICE (CP): THE ORIGINAL PRICE PAID TO ACQUIRE OR PRODUCE THE ITEM.
- PROFIT: THE FINANCIAL GAIN OBTAINED WHEN THE SELLING PRICE EXCEEDS THE COST PRICE.
- PROFIT PERCENTAGE: THE PROFIT EXPRESSED AS A PERCENTAGE OF THE COST PRICE.

IN OUR SCENARIO:

- THE SELLING PRICE (SP) IS \$400.
- THE PROFIT PERCENTAGE IS 25%.

WITH THESE, OUR GOAL IS TO DETERMINE:

1. THE COST PRICE (CP).
2. CONFIRM THE PROFIT AMOUNT IN DOLLARS.

STEP-BY-STEP CALCULATION OF COST PRICE

1. RECOGNIZING THE RELATIONSHIP BETWEEN PROFIT AND COST PRICE

THE PROFIT PERCENTAGE RELATES THE PROFIT TO THE COST PRICE:

$$\backslash[\backslash \text{TEXT{PROFIT PERCENTAGE}} = \backslash \text{LEFT} (\backslash \text{FRAC} \{ \backslash \text{TEXT{PROFIT}} \} \{ \backslash \text{TEXT{COST PRICE}} \} \backslash \text{RIGHT}) \backslash \text{TIMES } 100 \backslash]$$

REARRANGING TO FIND THE PROFIT:

$$\backslash[\backslash \text{TEXT{PROFIT}} = \backslash \text{LEFT} (\backslash \text{FRAC} \{ \backslash \text{TEXT{PROFIT PERCENTAGE}} \} \{ 100 \} \backslash \text{RIGHT}) \backslash \text{TIMES } \backslash \text{TEXT{COST PRICE}} \backslash]$$

SINCE THE PROFIT IS ALSO THE DIFFERENCE BETWEEN THE SELLING PRICE AND THE COST PRICE:

$$\backslash[\backslash \text{TEXT{PROFIT}} = \backslash \text{TEXT{SELLING PRICE}} - \backslash \text{TEXT{COST PRICE}} \backslash]$$

COMBINING THESE TWO RELATIONSHIPS:

$$\backslash[\backslash \text{TEXT{SELLING PRICE}} - \backslash \text{TEXT{COST PRICE}} = \backslash \text{LEFT} (\backslash \text{FRAC} \{ \backslash \text{TEXT{PROFIT PERCENTAGE}} \} \{ 100 \} \backslash \text{RIGHT}) \backslash \text{TIMES } \backslash \text{TEXT{COST PRICE}} \backslash]$$

THIS EQUATION ALLOWS US TO SOLVE FOR THE COST PRICE.

2. FORMULATING THE EQUATION

PLUGGING IN THE KNOWN VALUES:

$$\backslash[400 - \backslash \text{TEXT{CP}} = \backslash \text{LEFT} (\backslash \text{FRAC} \{ 25 \} \{ 100 \} \backslash \text{RIGHT}) \backslash \text{TIMES } \backslash \text{TEXT{CP}} \backslash]$$

SIMPLIFY:

$$\backslash[400 - \text{CP} = 0.25 \times \text{CP} \backslash]$$

BRING ALL TERMS INVOLVING CP TO ONE SIDE:

$$\backslash[400 = 0.25 \times \text{CP} + \text{CP} \backslash]$$

$$\backslash[400 = (0.25 + 1) \times \text{CP} \backslash]$$

$$\backslash[400 = 1.25 \times \text{CP} \backslash]$$

3. SOLVING FOR COST PRICE

DIVIDE BOTH SIDES BY 1.25:

$$\backslash[\text{CP} = \frac{400}{1.25} \backslash]$$

CALCULATING:

$$\backslash[\text{CP} = 320 \backslash]$$

THEREFORE, THE ORIGINAL COST PRICE OF THE ARTICLE IS \$320.

CALCULATING THE PROFIT AMOUNT

NOW THAT WE KNOW THE COST PRICE, CALCULATING THE ACTUAL PROFIT IN DOLLARS IS STRAIGHTFORWARD:

$$\backslash[\text{Profit} = \text{Selling Price} - \text{Cost Price} = 400 - 320 = 80 \backslash]$$

THE PROFIT MADE ON THE SALE IS \$80.

SUMMARY OF FINDINGS

PARAMETER	VALUE	EXPLANATION
COST PRICE (CP)	\$320	DERIVED FROM THE PROFIT PERCENTAGE AND SELLING PRICE.
SELLING PRICE (SP)	\$400	GIVEN IN THE PROBLEM STATEMENT.
PROFIT	\$80	DIFFERENCE BETWEEN SP AND CP.
PROFIT PERCENTAGE	25%	PROVIDED IN THE PROBLEM STATEMENT.

IMPLICATIONS OF PROFIT MARGINS IN BUSINESS

UNDERSTANDING PROFIT MARGINS IS VITAL FOR ASSESSING THE HEALTH AND SUSTAINABILITY OF A BUSINESS. A PROFIT MARGIN OF 25% INDICATES THAT FOR EVERY DOLLAR SPENT ON THE ARTICLE, THE SELLER EARNS 25 CENTS IN PROFIT. HERE ARE SOME KEY INSIGHTS:

- PROFIT MARGIN AS A PERFORMANCE INDICATOR: A HIGHER PROFIT MARGIN GENERALLY SIGNIFIES EFFICIENT COST MANAGEMENT AND PRICING STRATEGY.
- PRICING STRATEGIES: SETTING THE RIGHT SELLING PRICE TO ACHIEVE DESIRED PROFIT MARGINS IS CRUCIAL, ESPECIALLY IN COMPETITIVE MARKETS.
- COST CONTROL: KEEPING THE COST PRICE LOW WHILE MAINTAINING QUALITY CAN ENHANCE PROFIT MARGINS WITHOUT INCREASING THE SELLING PRICE.

ADDITIONAL CONSIDERATIONS AND PRACTICAL APPLICATIONS

1. MARKUP PERCENTAGE CALCULATION

THE MARKUP PERCENTAGE IS THE AMOUNT ADDED TO THE COST PRICE TO DETERMINE THE SELLING PRICE.

$$\text{MARKUP PERCENTAGE} = \left(\frac{\text{PROFIT}}{\text{COST PRICE}} \right) \times 100$$

IN THIS CASE:

$$\text{MARKUP} = \left(\frac{80}{320} \right) \times 100 = 25\%$$

THIS CONFIRMS THE PROFIT MARGIN ALIGNS WITH THE MARKUP PERCENTAGE, EMPHASIZING THE DIRECT RELATIONSHIP BETWEEN THESE TWO METRICS.

2. REAL-WORLD APPLICATION

SUPPOSE A RETAILER WANTS TO ACHIEVE A SPECIFIC PROFIT MARGIN; UNDERSTANDING THESE CALCULATIONS ALLOWS FOR:

- PRECISE PRICING TO MEET PROFIT GOALS.
- BUDGETING AND FORECASTING FUTURE SALES.
- EVALUATING THE IMPACT OF COST FLUCTUATIONS ON PROFITABILITY.

3. VARIATIONS IN PROFIT PERCENTAGE

IF THE PROFIT PERCENTAGE CHANGES, THE SALE PRICE AND PROFIT AMOUNT WILL ADJUST ACCORDINGLY. FOR EXAMPLE:

- IF PROFIT MARGIN IS INCREASED TO 30%:

$$\begin{aligned} \text{CP} &= \frac{\text{SP}}{1 + \text{Profit Margin}} = \frac{400}{1 + 0.30} = \frac{400}{1.30} \\ &\approx 307.69 \end{aligned}$$

PROFIT:

$$400 - 307.69 \approx 92.31$$

- IF PROFIT MARGIN DECREASES TO 20%:

$$\begin{aligned} \text{CP} &= \frac{400}{1 + 0.20} = \frac{400}{1.20} \\ &\approx 333.33 \end{aligned}$$

PROFIT:

$$400 - 333.33 \approx 66.67$$

CONCLUSION

THE SCENARIO OF SELLING AN ARTICLE FOR \$400 WITH A 25% PROFIT MARGIN EXEMPLIFIES FUNDAMENTAL PROFIT AND COST PRICE CALCULATIONS. BY METHODICALLY ANALYZING THE PROBLEM:

- THE COST PRICE WAS DETERMINED TO BE \$320.
- THE PROFIT REALIZED FROM THE SALE IS \$80.

THESE CALCULATIONS ARE CRITICAL TOOLS IN BUSINESS, ENABLING SELLERS TO SET APPROPRIATE PRICES, ANALYZE PROFIT MARGINS, AND MAKE INFORMED FINANCIAL DECISIONS. WHETHER IN RETAIL, MANUFACTURING, OR SERVICES, MASTERING THESE CONCEPTS ENSURES SUSTAINABLE GROWTH AND PROFITABILITY.

UNDERSTANDING THE RELATIONSHIPS BETWEEN SELLING PRICE, COST PRICE, PROFIT, AND PROFIT PERCENTAGE IS ESSENTIAL FOR EFFECTIVE BUSINESS MANAGEMENT. BY APPLYING THESE PRINCIPLES, ENTREPRENEURS CAN OPTIMIZE THEIR PRICING STRATEGIES, CONTROL COSTS, AND ULTIMATELY ENHANCE THEIR PROFITABILITY.

EMPOWERING BUSINESSES WITH PRECISE CALCULATIONS LEADS TO BETTER DECISION-MAKING.

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