

Giving Your Spreadsheet a Brain

Introduction to IF Statements

- **The Problem:** Right now, your spreadsheets are just calculators. They can only do math.
- **The Solution:** The IF function teaches your spreadsheet to make decisions.
- **The Goal:** By the end of this lesson, you will be able to write formulas that "think" and react differently based on the data.

The Logic (The Fork in the Road)

Think of an IF statement like a flowchart.

The computer asks a simple **Yes/No** question.

1

IF the answer is Yes (True):

Go down Path A.

2

IF the answer is No (False):

Go down Path B.

Analogy: "IF it is raining, take an umbrella. OTHERWISE, wear sunglasses."

The Formula: =IF(logical_test, value_if_true, value_if_false)

- **Part 1: Logical Test:** The question you are asking (e.g., Score > 60).
- **Part 2: Value if True:** What happens if the answer is Yes?
- **Part 3: Value if False:** What happens if the answer is No?

📌 *Tip:* Commas are very important! They separate the three parts of the brain.

Scenario: The Pass/Fail Checker

- **The Goal:** If a student scores 60 or higher, mark them as "Pass". If lower, mark "Fail".
- **The Data:** Cell B2 contains the score (e.g., 85).
- **The Formula:** =IF(B2>=60, "Pass", "Fail")

📌 **Key Rule:** When displaying words, you must put them inside "quotation marks".

Real-World Example 2 (Numbers)

Scenario: The Sales Bonus Calculator

- **The Goal:** If an agent sells over \$10,000, give them a \$500 bonus. Otherwise, they get \$0.
- **The Data:** Cell B2 contains the sales amount.
- **The Formula:** =IF(B2>10000, 500, 0)

📌 **Key Rule:** When displaying numbers (for math), do NOT use quotation marks.

Summary & Challenge

Recap:

- IF statements make your sheets dynamic.
- Always remember the 3 parts: Test, True, False.
- Use quotes for text " ", no quotes for numbers.

The "Level Up" Challenge:

- Try a **Nested IF**: Can you make a formula that handles Grades A, B, and C?

 *Hint:* You can put an IF inside another IF!