APPLIED SOFTWARE AUTOMATION TOOLS

RIGA TECHNICAL UNIVERSITY

COURSE 1

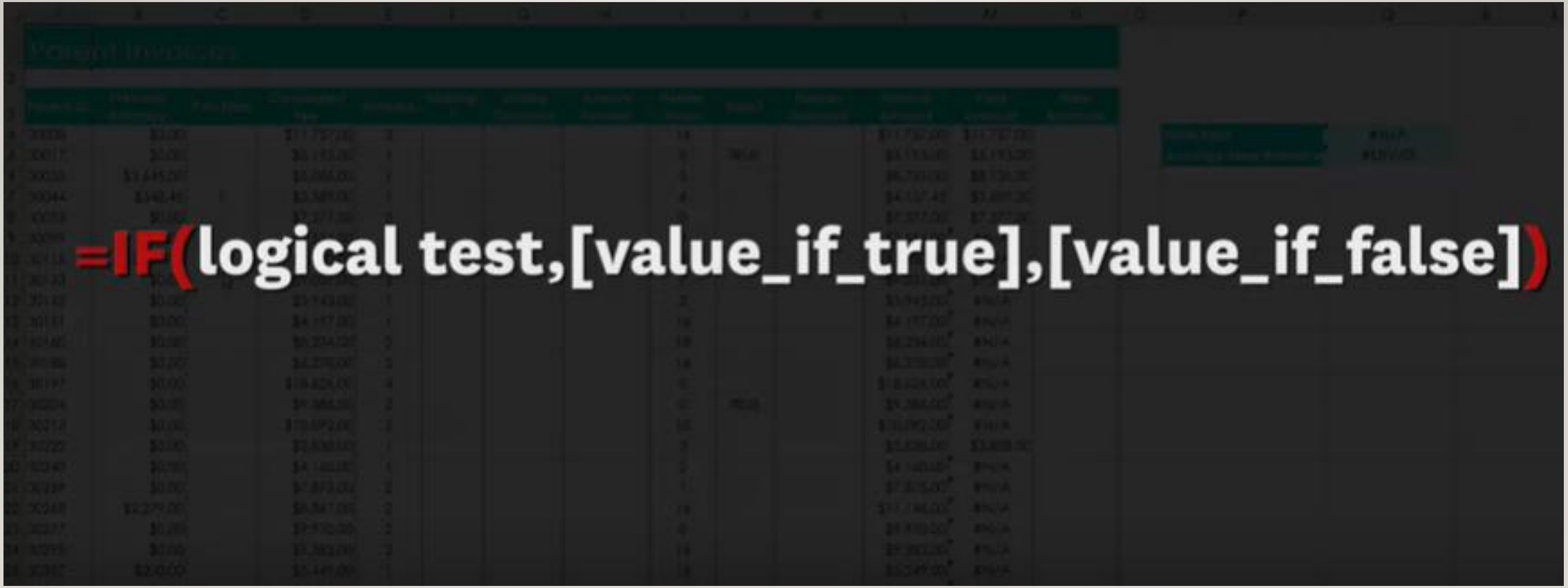
17.09.2020

STRUCTURE

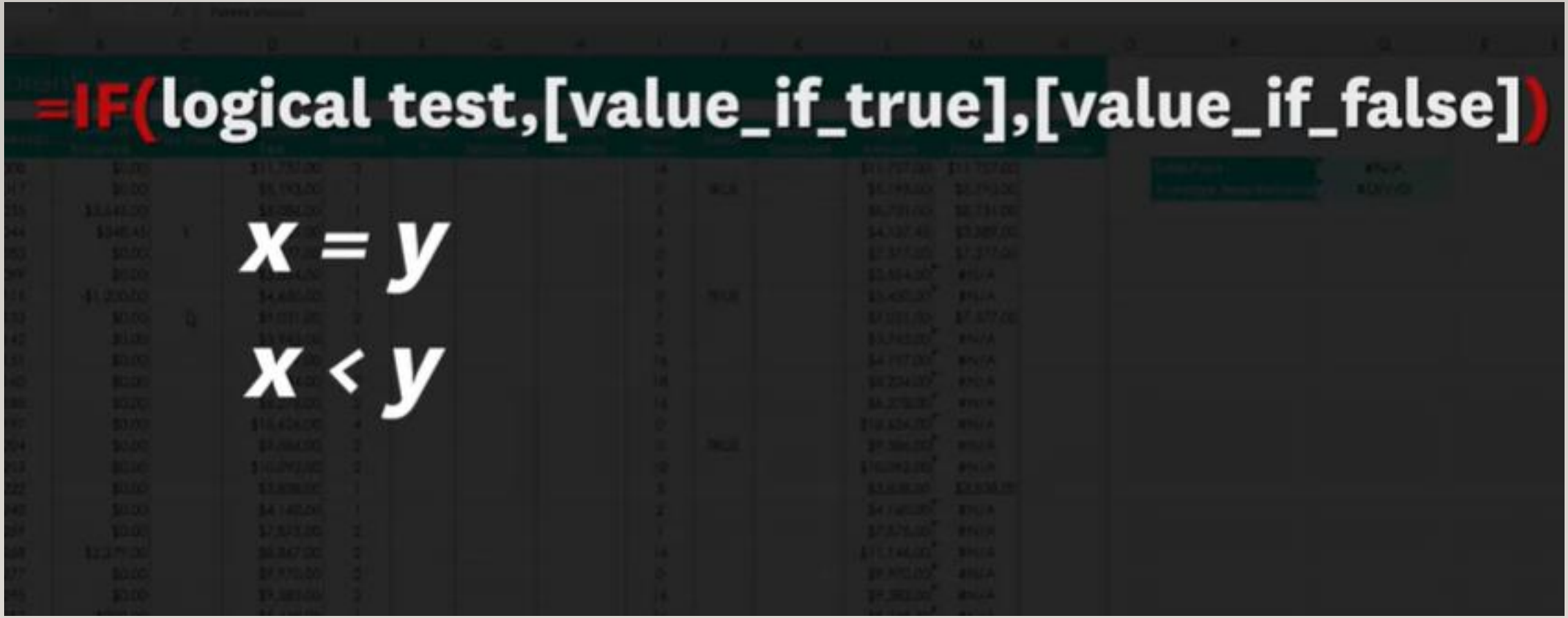
Logical Functions:

1. IF
2. AND & OR
3. IF with AND and with OR
4. Nested Ifs
5. IFERROR and IFNA

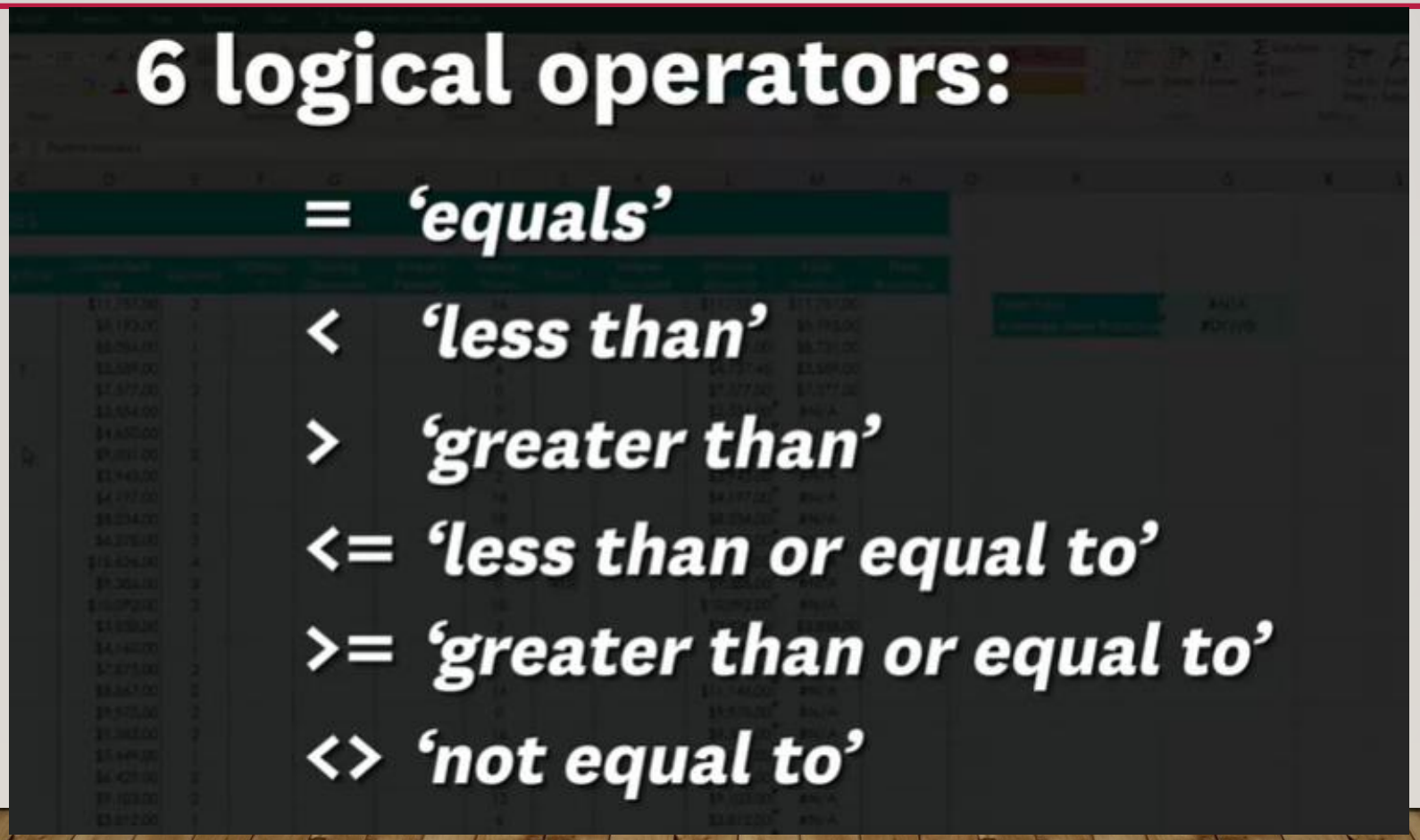
1. LOGICAL FUNCTIONS: IF



MUST USE OPERATORS IN LOGICAL FUNCTION



TYPES OF THE OPERATOR




=IF(logical test,[value_if_true],[value_if_false])

EXAMPLE IF IN EXCEL

- Using following IF formulation we can see if the students have siblings or not ?

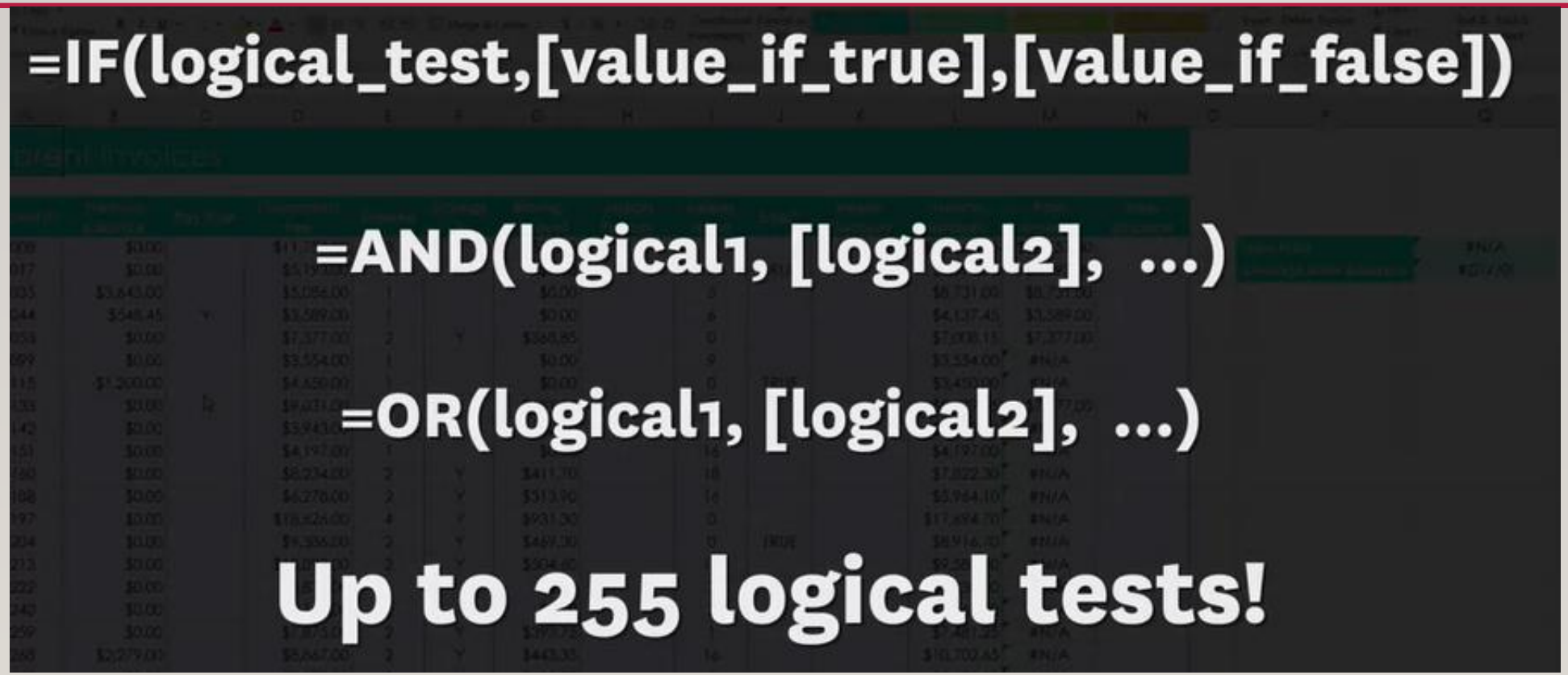
=IF(E4>=2,"Y","")

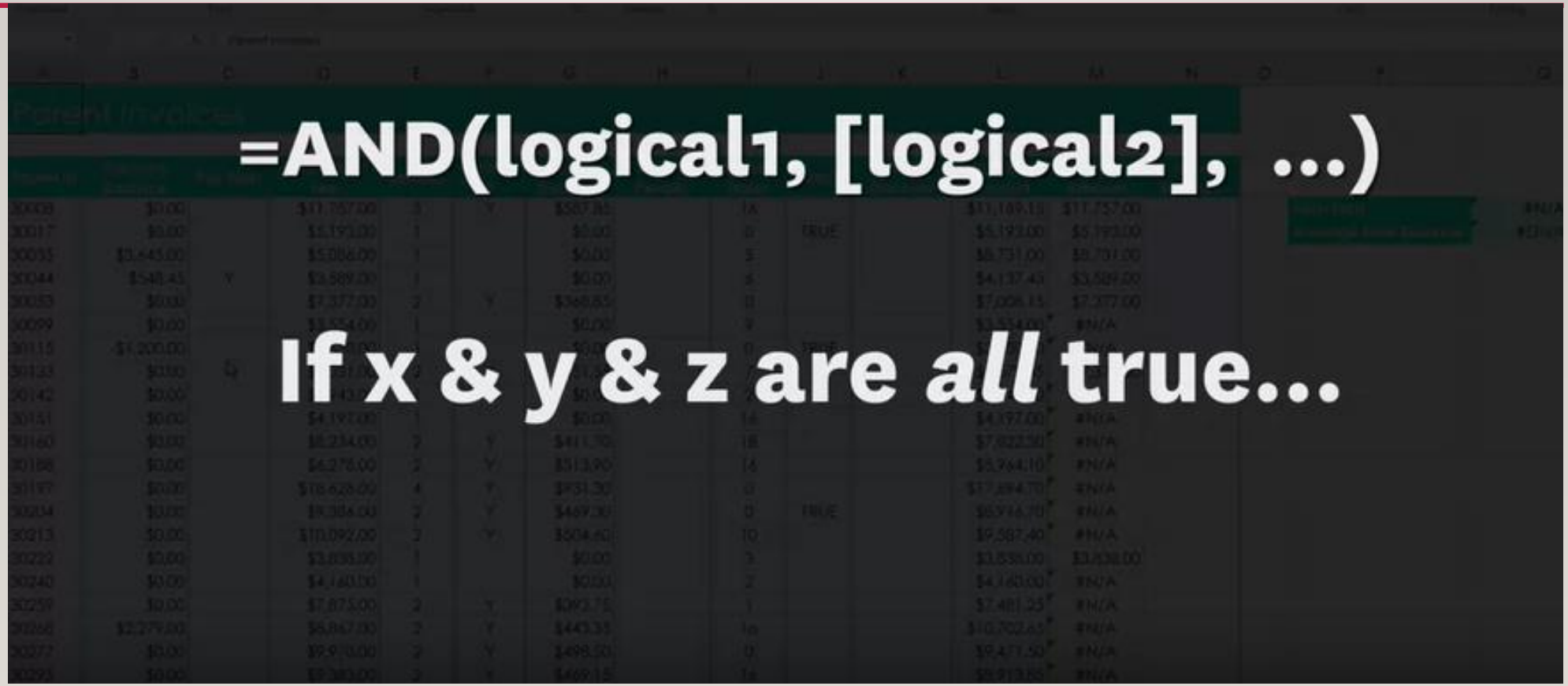
EXAMPLE IF IN EXCEL

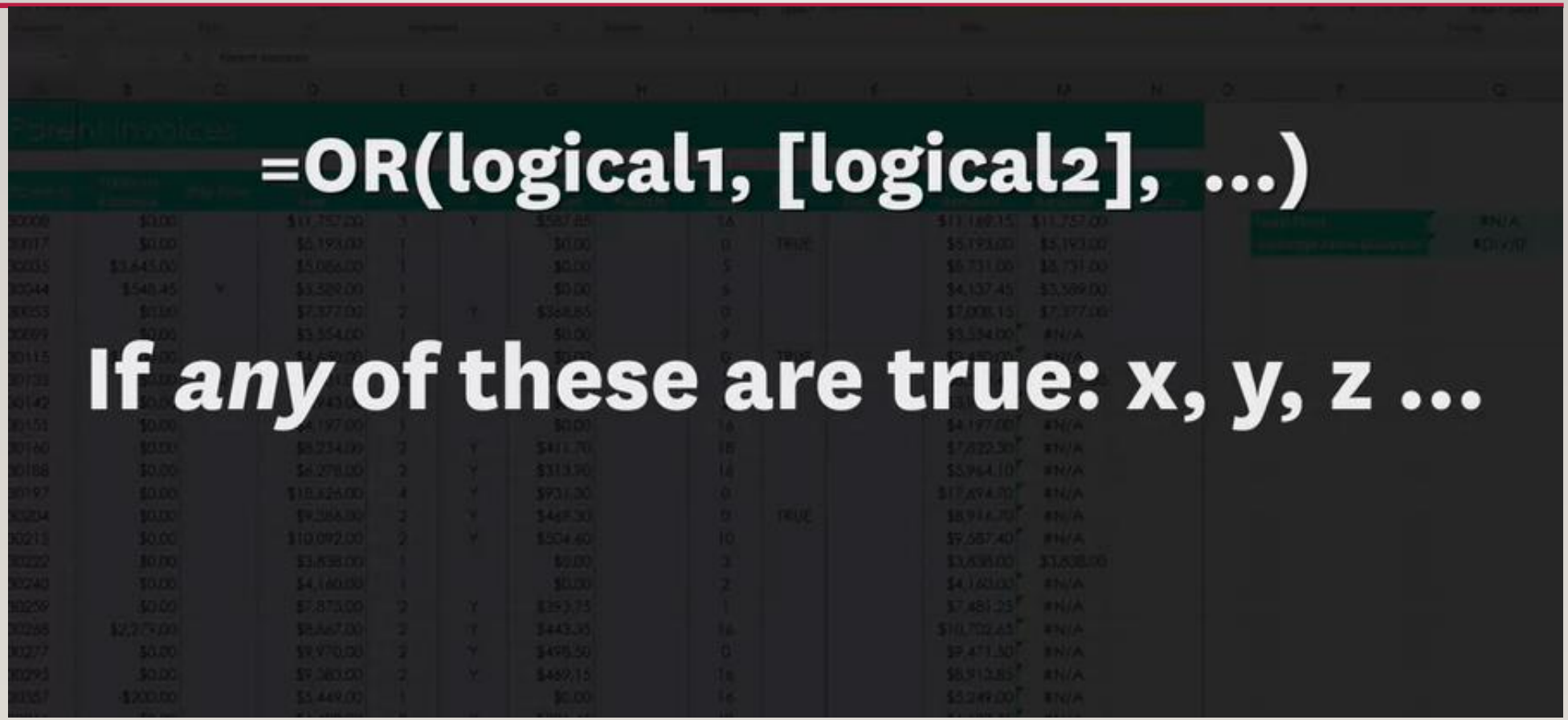
- Using following IF formulation we can see how much discount parents get due to sibling discount eligibility (5%).

=IF(F4="Y",C4*5%,0)

2. LOGICAL FUNCTIONS: AND & OR




=AND(logical1, [logical2], ...)
If x & y & z are *all* true...


=OR(logical1, [logical2], ...)
If *any* of these are true: x, y, z ...

EXAMPLE AND & OR IN EXCEL

- Using AND function, where is both factors had to be true we can see the list of parent who have to pay an arrears penalty.

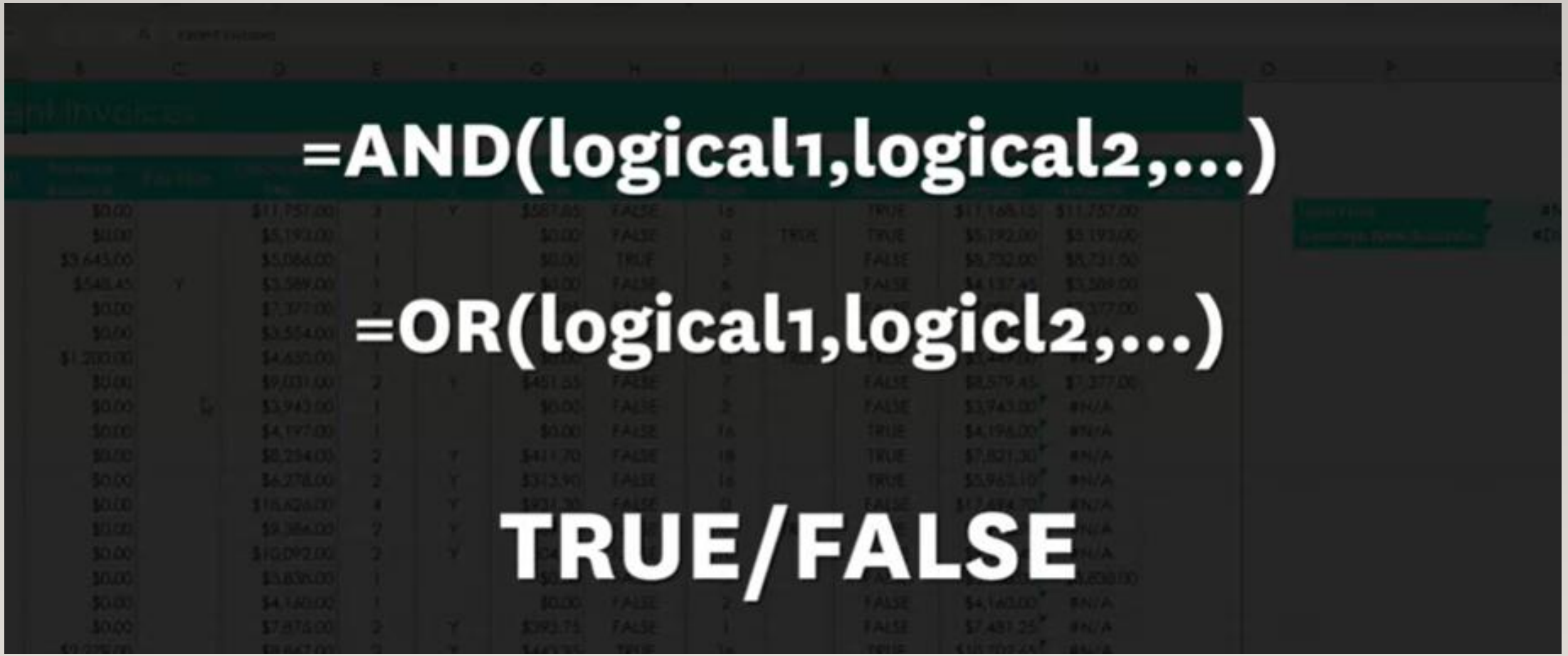
=AND(B4>0,C4<>"Y")

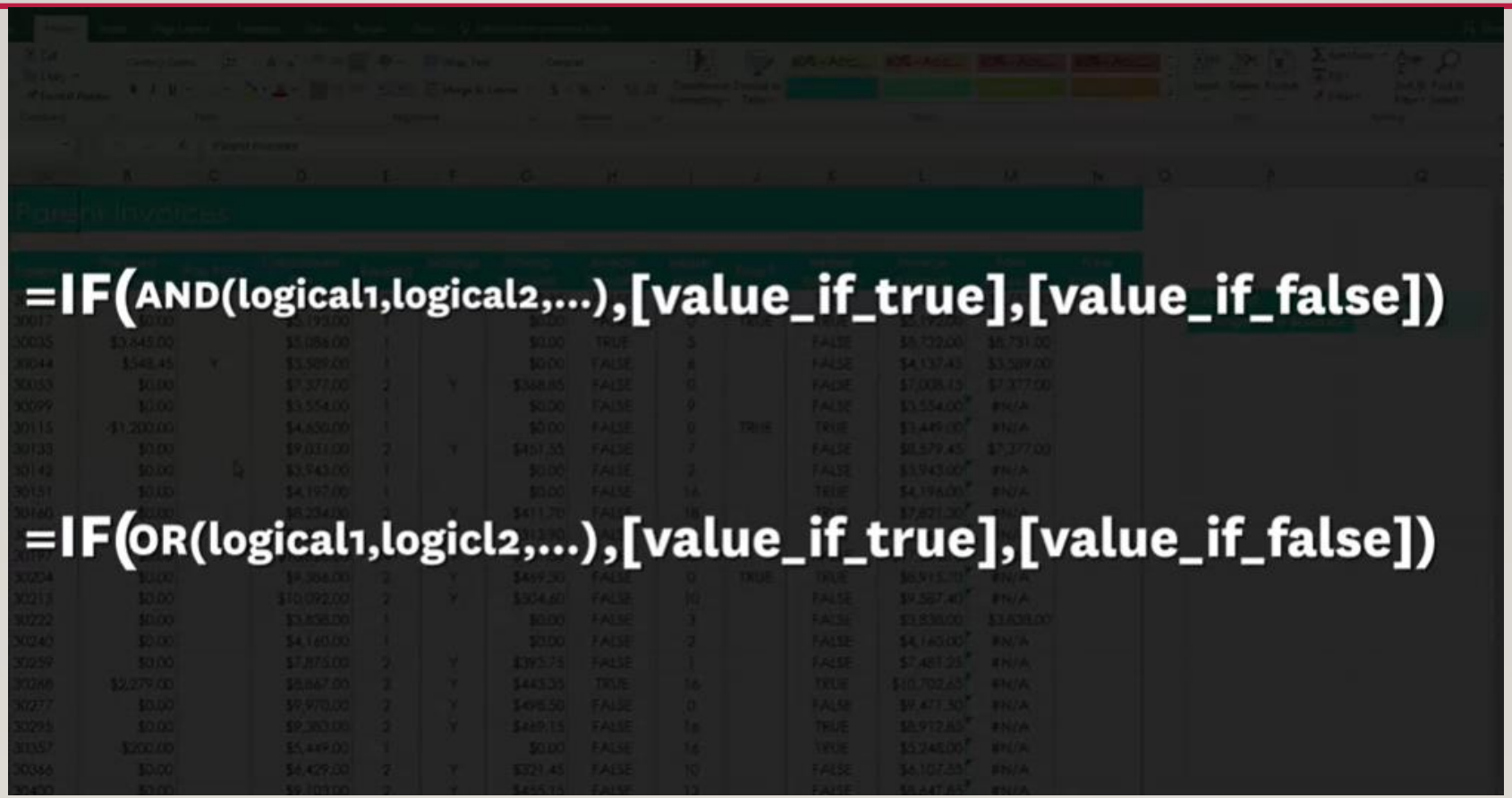
EXAMPLE AND & OR IN EXCEL

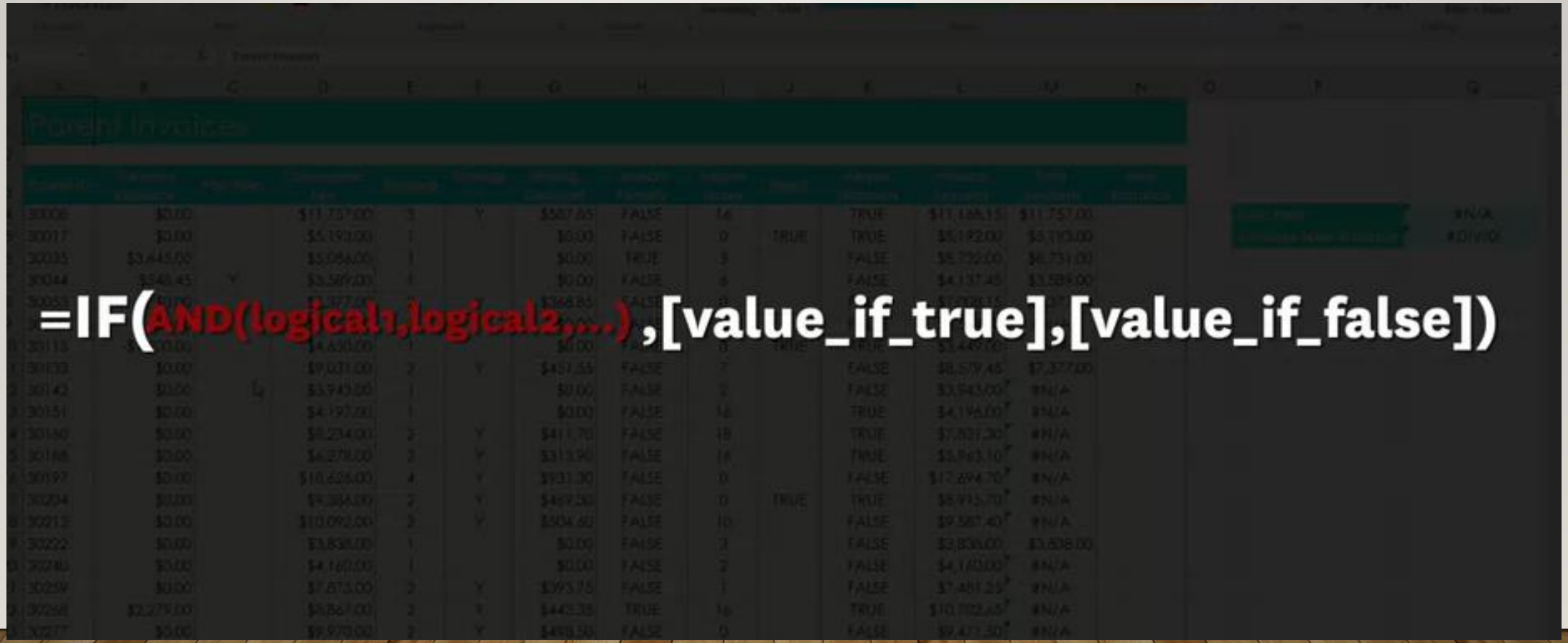
- Using OR function, where is one factors had to be true we can see the list of parent who have deserved Helper/volunteer discount.

=OR(I4>=16,J4)

3. LOGICAL FUNCTIONS: IF WITH AND & WITH OR




=IF(AND(logical1,logical2,...),[value_if_true],[value_if_false])
=IF(OR(logical1,logicl2,...),[value_if_true],[value_if_false])


=IF(AND(logical1,logical2,...),[value_if_true],[value_if_false])

EXAMPLE IF WITH AND & WITH OR IN EXCEL

- Using following IF with AND function, where is both factors had to be true we can see the amounts of penalty for each.

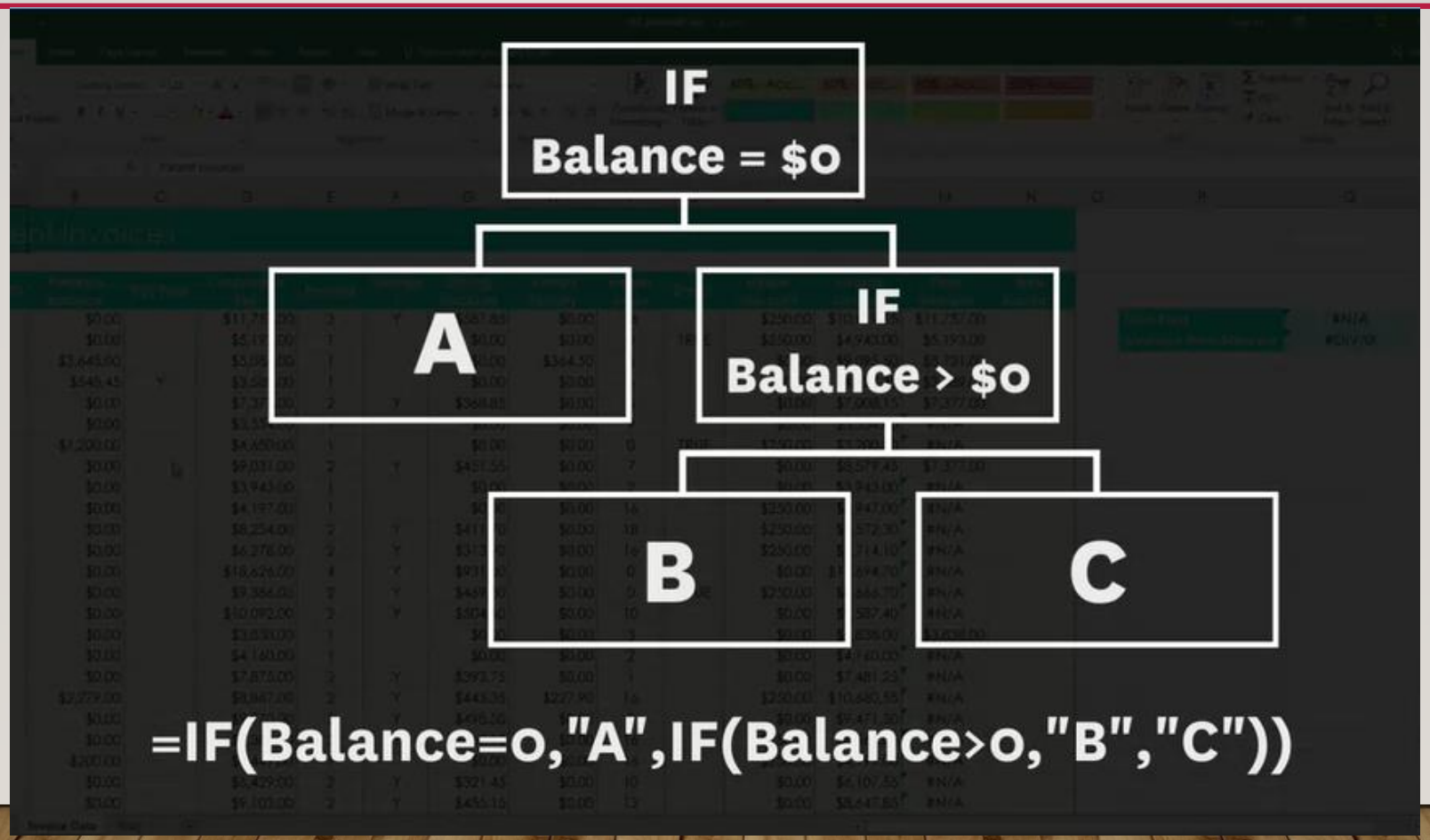
=IF(AND(B4>0,D4<>"Y"),B4*10%,0)

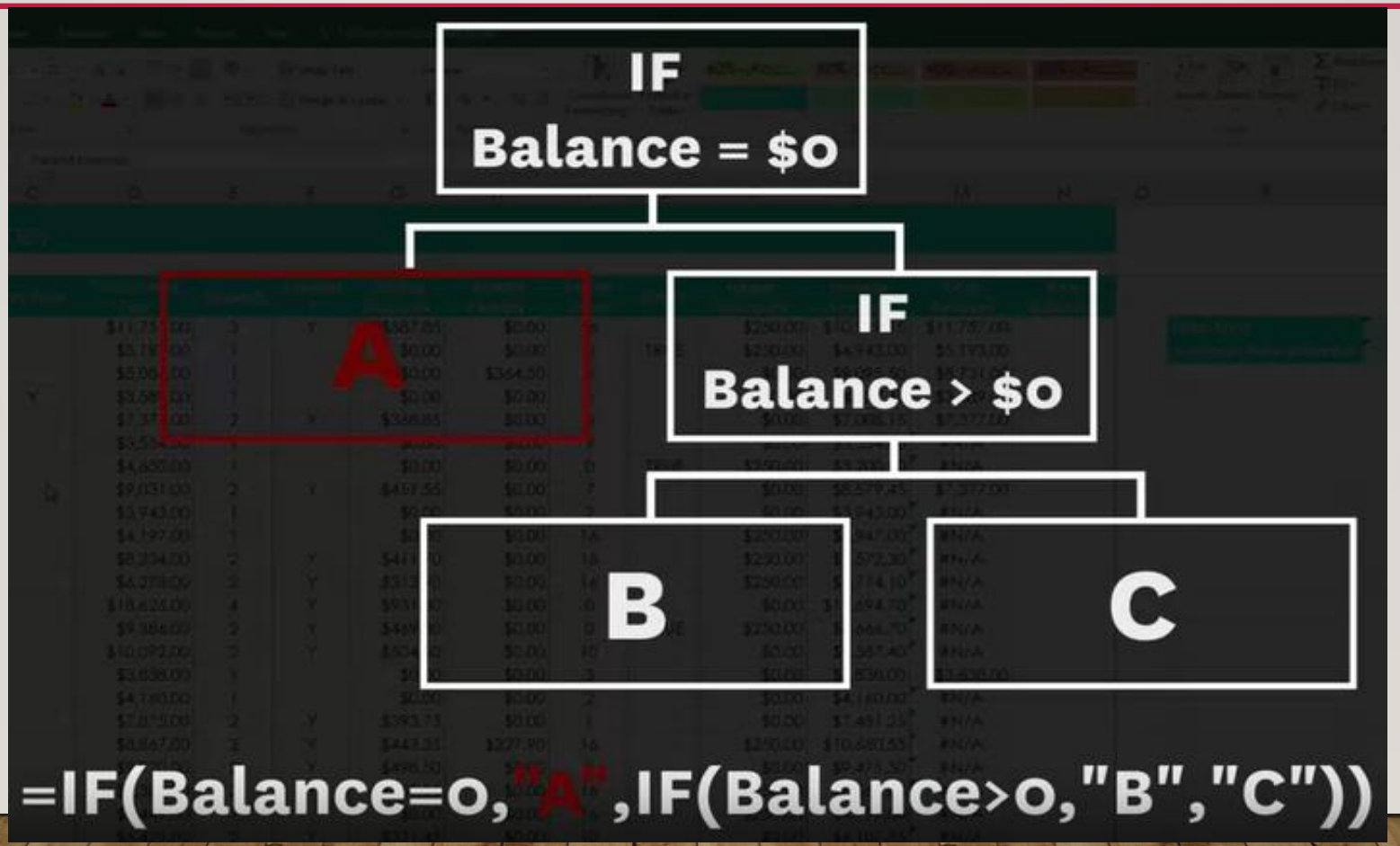
EXAMPLE IF WITH AND & WITH OR IN EXCEL

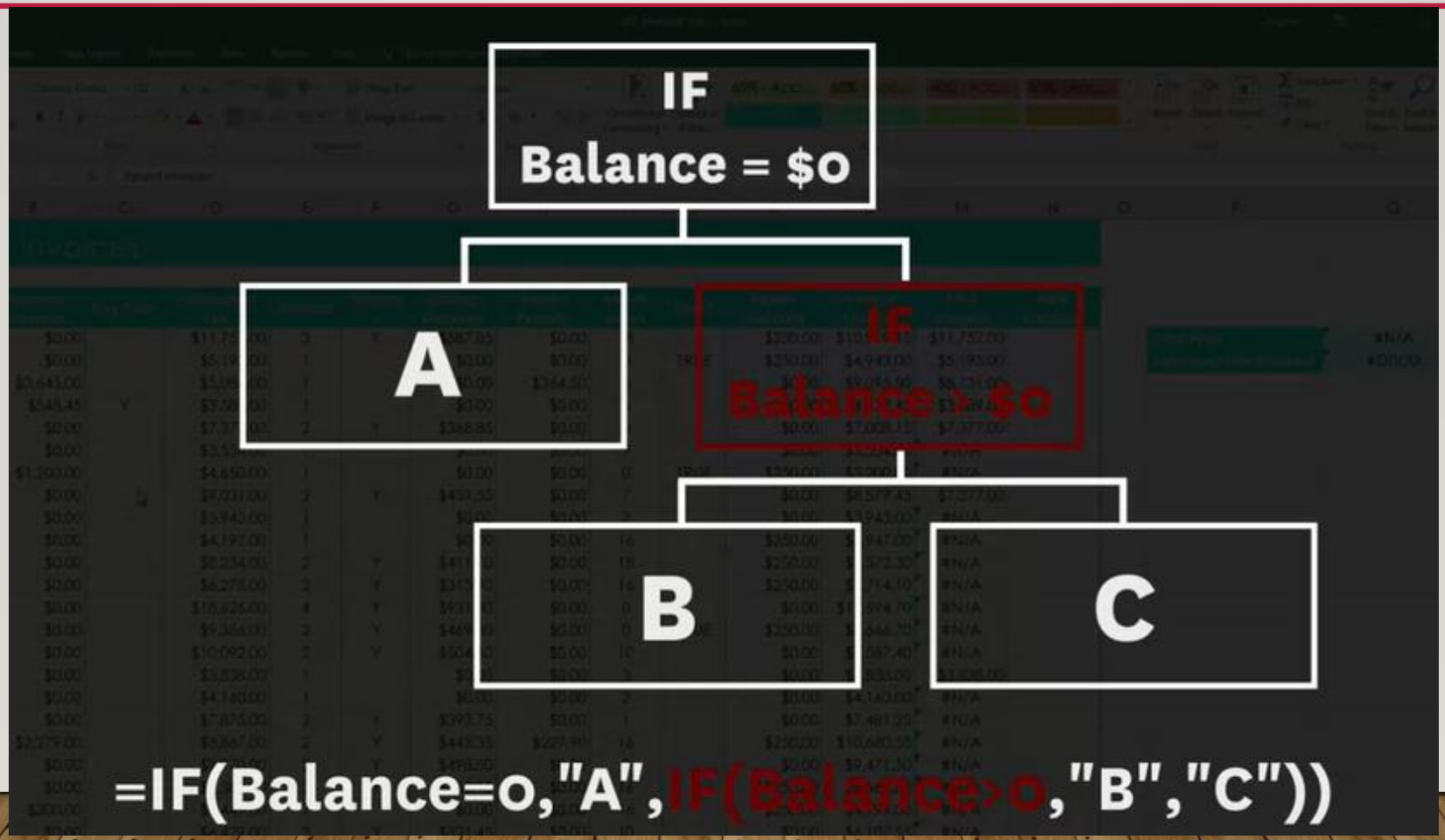
- Using following IF with OR function, where is one factors had to be true we can see the amount of volunteer discount.

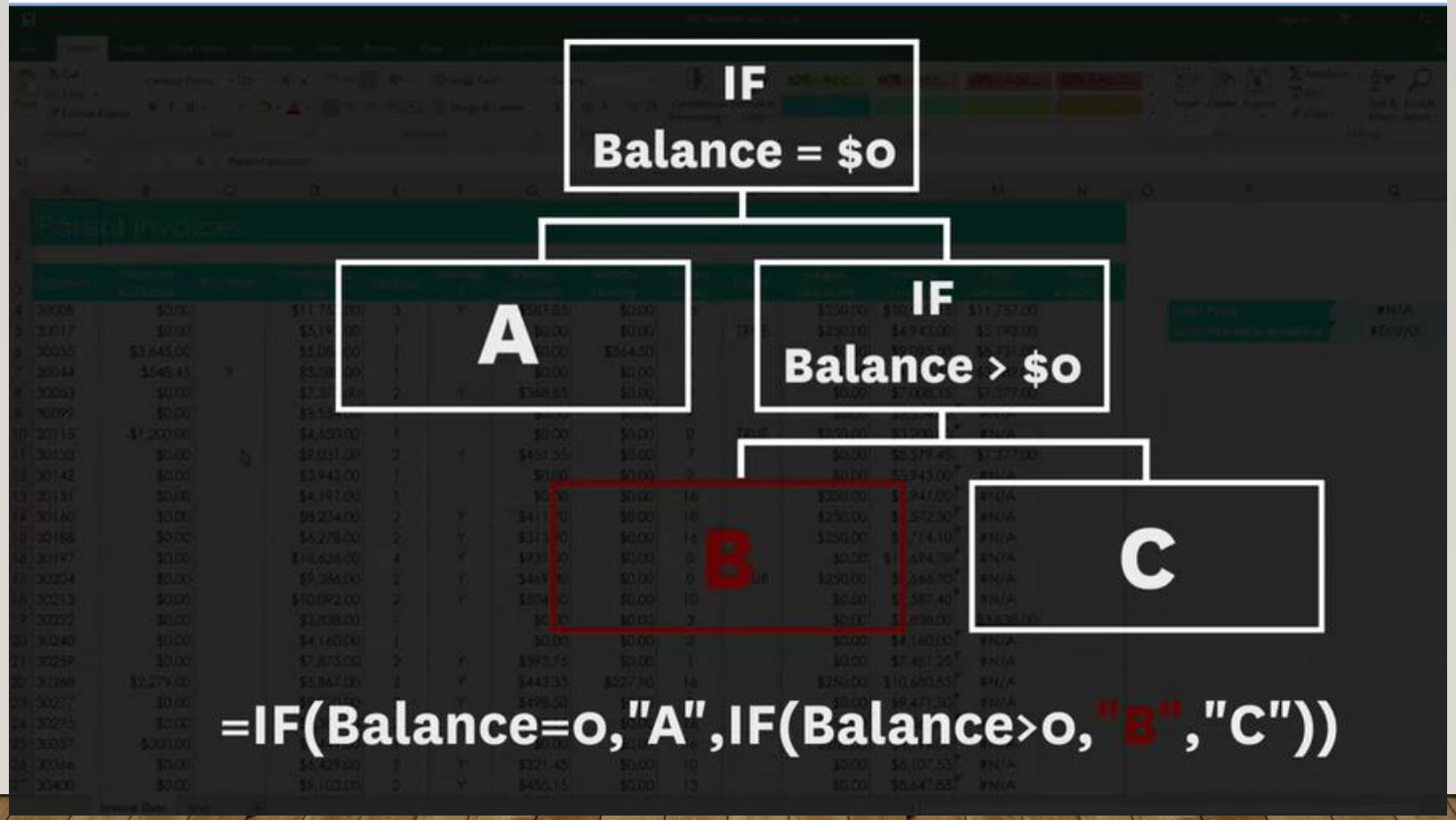
=IF(OR(J4>=16,K4),250,0)

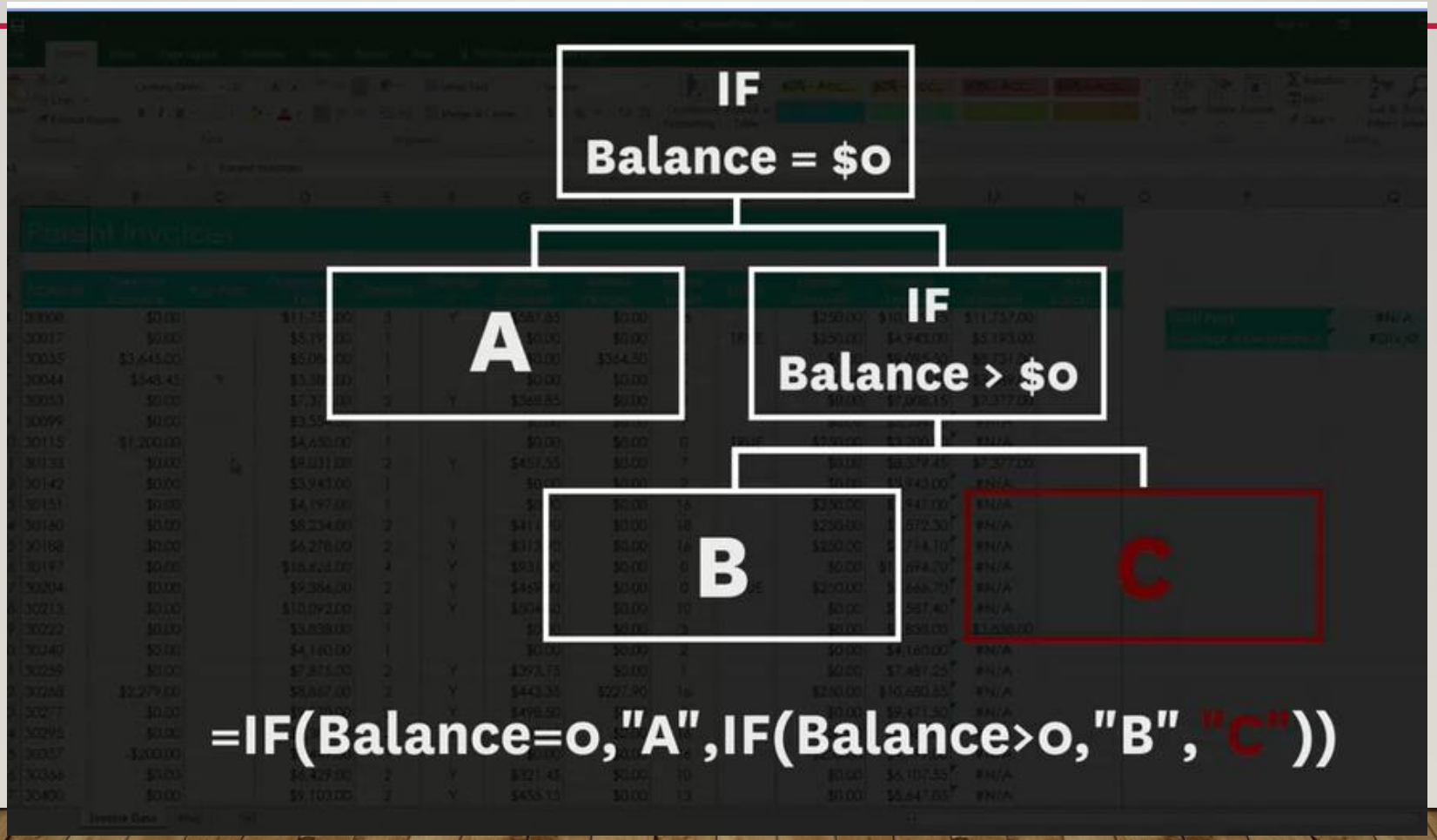
4. LOGICAL FUNCTIONS: NESTED IFS


IF
Balance = $0
A
IF
Balance > $0
B
C
=IF(Balance=0,"A",IF(Balance>0,"B","C"))


IF
Balance = $0
A
IF
Balance > $0
B
C
=IF(Balance=0,"A",IF(Balance>0,"B","C"))


IF
Balance = $0
A
IF
Balance > $0
B
C
=IF(Balance=0,"A",IF(Balance>0,"B","C"))


IF
Balance = $0
A
IF
Balance > $0
B
C
=IF(Balance=0,"A",IF(Balance>0,"B","C"))


IF
Balance = $0
A
IF
Balance > $0
B
C
=IF(Balance=0,"A",IF(Balance>0,"B","C"))

EXAMPLE NESTED IFS IN EXCEL

- Using following NestedIF formulation we can see who are in which category.

=IF(B4=0,"A",IF(B4>0,"B","C"))

EXAMPLE NESTED IFS IN EXCEL

- Using following NestedIF formulation we can see what is the sibling discount amounts depends on their category.

=IF(F4=1,0,IF(F4=2,E4*5%,E4*8%))

5. LOGICAL FUNCTIONS: IFERROR AND IFNA

- #DIV/0! – Means basically you are trying to divide something by zero.

- #N/A – this actually stands for Not Applicable, it does not find something you are looking for.

EXAMPLE IFERROR AND IFNA IN EXCEL

- Miscalculations can be fixed but sometimes, we get an error because the inputs are wrong or missing. Thus using IFERROR we can fix wrong or missing inputs (#DIV/0!)

=IFERROR(AVERAGE('Invoice Data'!$O$4:$O$654),"")

EXAMPLE IFERROR AND IFNA IN EXCEL

- Just completing empty cell “New Balance”

  =B4+M4-N4

EXAMPLE IFERROR AND IFNA IN EXCEL

- Fixing the cell which is referred to other spreadsheet in the excel. Using IF Not Applicable function (#N/A).

```
=IFNA(VLOOKUP('Invoice
Data'!$A4,BPay!$B$4:$D$10,3,0),0)
```

THANK YOU