Below is how to calculate Turnover Rate step-by-step  
  
From the guidance:   
*Turnover Rate = No of Emp Exit in the Period/ Avg No. of Emp in the Period*In which,   
*Avg No. of Employee in the Period = No. of Emp Beginning of Period + No. of Emp End of Period)/2)***I. First, let’s calculate Turnover Rate for 2021 as an example to understand the calculation logic:**  
0. Overall measure for No. of Emp: *No. of Emp = count(FACT\_Employees[Employee ID])*

1. No. Of Employee Exit in 2021 is No. Of Employees that left the company on or after the first day of the year (1/1/2021) and on or before the last day of the year (31/12/2021)

*No. of Emp Exit in 2021 =*

*Calculate([No. of Emp],*

*FACT\_Employees[Exit Date] >= date(2021,1,1),*

*FACT\_Employees[Exit Date] <= date(2021,12,31))*  
  
2. No. of Employees Begining of 2021 is No. Of Employees that was hired on or before 1/1/2021 and left after 1/1/2021 or have not yet left the company until now (Exit is blank)

*No. of Emp Begining of 2021 =*

*Calculate([No. of Emp],*

*FACT\_Employees[Hire Date] <= date(2021,1,1),*

*FACT\_Employees[Exit Date] > date(2021,1,1) || ISBLANK(FACT\_Employees[Exit Date]))*

3. No. of Employees End of 2021 is No. Of Employees that was hired on or before 31/12/2021 and left after 31/12/2021 or have not yet left the company until now (Exit is blank)

No. of Emp End of 2021 =

*Calculate([No. of Emp],*

*FACT\_Employees[Hire Date] <= date(2021,12,31),*

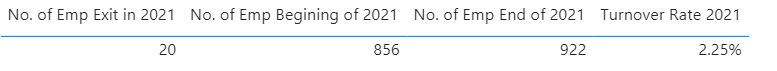
*FACT\_Employees[Exit Date] > date(2021,12,31) || ISBLANK(FACT\_Employees[Exit Date]))*  
  
4. Now we can calculate Turnover Rate:

*Turnover Rate 2021 =*

*VAR AvgEmp = DIVIDE([No. of Emp Begining of Period]+[No. of Emp End of Period], 2)*

*VAR ExitEmp = [No. of Emp Exit in Period]*

*RETURN Divide(ExitEmp, AvgEmp)*  
  
5. Calculate Retention Rate from Turnover Rate

*Retention Rate 2021 = 1 - Retention Rate = 1 - [Turnover Rate 2021]*  
  
Results when we put in a table:   
  
  
**II. Now, let’s use the logic above and calculate dynamic Turnover rate in any period of time (year, quarter, month, or over several years,...)**  
  
Note: In the model, build active relationship between Hire Date and Date in Dim\_Date table, and inactive relaionship between Exit Date and Date in Dim\_Date table.

1.  
*No. of Emp Exit in Period =*

*Calculate([No. of Emp]+0,*

*FACT\_Employees[Exit Date] >= min(DIM\_Date[Date]),*

*FACT\_Employees[Exit Date] <= max(DIM\_Date[Date]),*

*USERELATIONSHIP(DIM\_Date[Date], FACT\_Employees[Exit Date]),*

*All(DIM\_Date))*

2.  
*No. of Emp Begining of Period =*

*Calculate([No. of Emp],*

*FACT\_Employees[Hire Date] <= min(DIM\_Date[Date]),*

*FACT\_Employees[Exit Date] > min(DIM\_Date[Date]) || ISBLANK(FACT\_Employees[Exit Date]),*

*USERELATIONSHIP(DIM\_Date[Date], FACT\_Employees[Exit Date]),*

*ALL(DIM\_Date))*

3.  
*No. of Emp End of Period =*

*Calculate([No. of Emp],*

*FACT\_Employees[Hire Date] <= max(DIM\_Date[Date]),*

*FACT\_Employees[Exit Date] > max(DIM\_Date[Date]) || ISBLANK(FACT\_Employees[Exit Date]),*

*USERELATIONSHIP(DIM\_Date[Date], FACT\_Employees[Exit Date]),*

*All(DIM\_Date))*

4.  
*Turnover Rate =*

*VAR AvgEmp = DIVIDE([No. of Emp Begining of Period]+[No. of Emp End of Period], 2)*

*var ExitEmp = [No. of Emp Exit in Period]*

*Return Divide(ExitEmp, AvgEmp)*

5.

*Retention Rate = 1 - [Turnover Rate]*

Result by Years:  
A screenshot of a data

Description automatically generated