Basic Level (1–10)

1. **Concatenate First and Last Name**

DAX

CopyEdit

FullName = Customers[FirstName] & " " & Customers[LastName]

2. **Convert Email Address to Uppercase**

DAX

CopyEdit

Email_Upper = UPPER(Customers[EmailAddress])

3. **Extract First 3 Characters from First Name**

DAX

CopyEdit

First3Chars = LEFT(Customers[FirstName], 3)

4. **Count Characters in Last Name**

DAX

CopyEdit

LastName_Length = LEN(Customers[LastName])

5. **Convert First Name to Lowercase**

DAX

CopyEdit

FirstName_Lower = LOWER(Customers[FirstName])

6. **Trim Spaces in EnglishEducation**

DAX

CopyEdit

Education_Trimmed = TRIM(Customers[EnglishEducation])

7. **Repeat '*' Character Equal to Length of First Name**

DAX

CopyEdit

Stars_FirstName = REPT("*", LEN(Customers[FirstName]))

8. **Get Last 4 Characters of Phone Number**

DAX

CopyEdit

Last4_Phone = RIGHT(Customers[Phone], 4)

9. **Format YearlyIncome to Currency with 2 Decimals**

DAX

CopyEdit

Income_Currency = FORMAT(Customers[YearlyIncome], "$#,##0.00")

10. **Check If FirstName and LastName Are Exactly the Same**

DAX

CopyEdit

Same_Name = IF(Customers[FirstName] = Customers[LastName], TRUE(), FALSE())

Intermediate Level (11–20)

11. **Find If 'Manager' Appears in Occupation (Case Sensitive)**

DAX

CopyEdit

Is_Manager = IF(SEARCH("Manager", Customers[Occupation], 1, 0) > 0, TRUE(), FALSE())

12. **Search for 'graduate' in EnglishEducation (Case Insensitive)**

DAX

CopyEdit

Is_Graduate = IF(SEARCH("graduate", LOWER(Customers[EnglishEducation]), 1, 0) > 0, TRUE(), FALSE())

13. **Extract Characters 3–7 from First Name**

DAX

CopyEdit

Chars3to7 = MID(Customers[FirstName], 3, 5)

14. **Replace Area Code in Phone Number with 'XXX'**

DAX

CopyEdit

Phone_Masked_Area = "XXX" & MID(Customers[Phone], 4, LEN(Customers[Phone]) - 3)

15. **Format BirthDate as 'DD-MM-YYYY'**

DAX

CopyEdit

BirthDate_Format = FORMAT(Customers[BirthDate], "DD-MM-YYYY")

16. **Create Initial + Last Name Format (e.g., J.Smith)**

DAX

CopyEdit

Initial_LastName = LEFT(Customers[FirstName], 1) & "." & Customers[LastName]

17. **Capitalize First Letter of FirstName, Lowercase the Rest**

DAX

CopyEdit

FirstName_Capitalize = UPPER(LEFT(Customers[FirstName], 1)) &
LOWER(MID(Customers[FirstName], 2, LEN(Customers[FirstName]) - 1))

18. **Substitute Dashes with Spaces in Phone**

DAX

CopyEdit

Phone_Spaces = SUBSTITUTE(Customers[Phone], "-", " ")

19. **Convert BirthDate Year to Numeric Using VALUE**

DAX

CopyEdit

BirthYear_Value = VALUE(FORMAT(Customers[BirthDate], "YYYY"))

20. **Show YearlyIncome Rounded to 1 Decimal Without Commas**

DAX

CopyEdit

Income_OneDecimal = FORMAT(ROUND(Customers[YearlyIncome], 1), "0.0")

Advanced Level (21–30)

21. **Customer Code: First 2 Letters of LastName + Last 2 of CustomerKey**

DAX

CopyEdit

```
Customer_Code = LEFT(Customers[LastName], 2) & RIGHT(Customers[CustomerKey], 2)
```

22. **Validate Email Ends with '.com' and Contains '@'**

DAX

CopyEdit

```
Email_Valid = IF(RIGHT(Customers[EmailAddress], 4) = ".com" && FIND("@", Customers[EmailAddress], 1, 0) > 0, TRUE(), FALSE())
```

23. **Extract Domain Name from EmailAddress**

DAX

CopyEdit

```
Email_Domain = RIGHT(Customers[EmailAddress], LEN(Customers[EmailAddress]) - FIND("@", Customers[EmailAddress], 1))
```

24. **Mask Phone Number Except Last 4 Digits**

DAX

CopyEdit

```
Phone_Masked = REPT("*", LEN(Customers[Phone]) - 4) & RIGHT(Customers[Phone], 4)
```

25. **Proper Casing of Last Name (manually)**

DAX

CopyEdit

```
LastName_Proper = UPPER(LEFT(Customers[LastName], 1)) & LOWER(MID(Customers[LastName], 2, LEN(Customers[LastName]) - 1))
```

26. **Replace Multiple Spaces in EnglishOccupation with Single Space**

DAX

CopyEdit

```
Occupation_SingleSpace = SUBSTITUTE(TRIM(Customers[Occupation]), "  ", " ")
```

27. **Generate Custom ID: Initials + Birth Year (e.g., JD_1985)**

DAX

CopyEdit

```
Custom_ID = LEFT(Customers[FirstName], 1) & LEFT(Customers[LastName], 1) & "_" & FORMAT(Customers[BirthDate], "YYYY")
```

28. **Remove Hyphens and Convert Phone to Number**

DAX

CopyEdit

```
Phone_Number = VALUE(SUBSTITUTE(Customers[Phone], "-", ""))
```

29. **Customer Segmentation (Education + Income)**

DAX

CopyEdit

```
Customer_Segment =
SWITCH(
  TRUE(),
  Customers[EnglishEducation] = "Graduate Degree" && Customers[YearlyIncome] > 90000, "Elite",
  Customers[EnglishEducation] = "Bachelors" && Customers[YearlyIncome] >= 60000 && Customers[YearlyIncome] <= 90000, "Professional",
  Customers[EnglishEducation] = "High School", "Basic",
  "Other"
)
```

30. **Measure: Customer Count by Gender or Total**

DAX

CopyEdit

```
Customer_Count =
VAR SelectedGenders = VALUES(Customers[Gender])
VAR GenderCount = COUNTROWS(SelectedGenders)
RETURN
  IF(
    GenderCount = 0,
    COUNTROWS(Customers),
    IF(GenderCount = 1,
```

```
        CALCULATE(COUNTROWS(Customers), Customers[Gender] IN SelectedGenders),
        "Multiple Values Selected"
    )
)
```