Churn Analysis Using MySQL and Power BI

Introduction

Project Overview: Analyzing customer churn to understand patterns and reduce churn rate.

Objectives: Identify key metrics, analyze customer behavior, and provide actionable insights.

Data Sources & Tools

Data Source: Customer Churn Dataset

Tools: MySQL for querying data, Power BI for visualization

Problem Statements

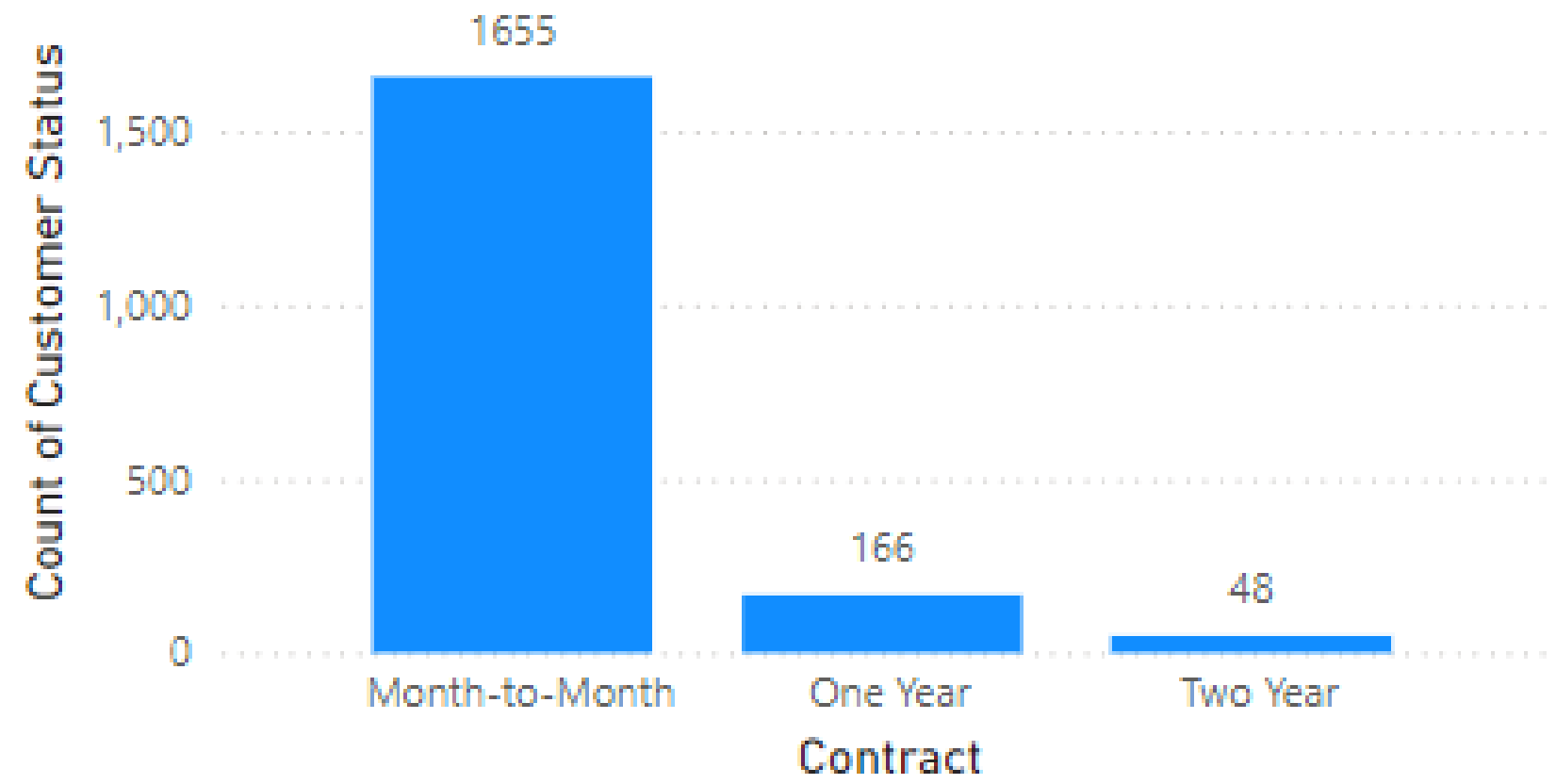Identify the total number of customers and the churn rate

7043	1869
Count of Customer ID	Count of Customer Status

Churn Rate 32.80 %

Find the average age of churned customers

Customer Status	Average of Age
Churned	49.74
Total	**49.74**

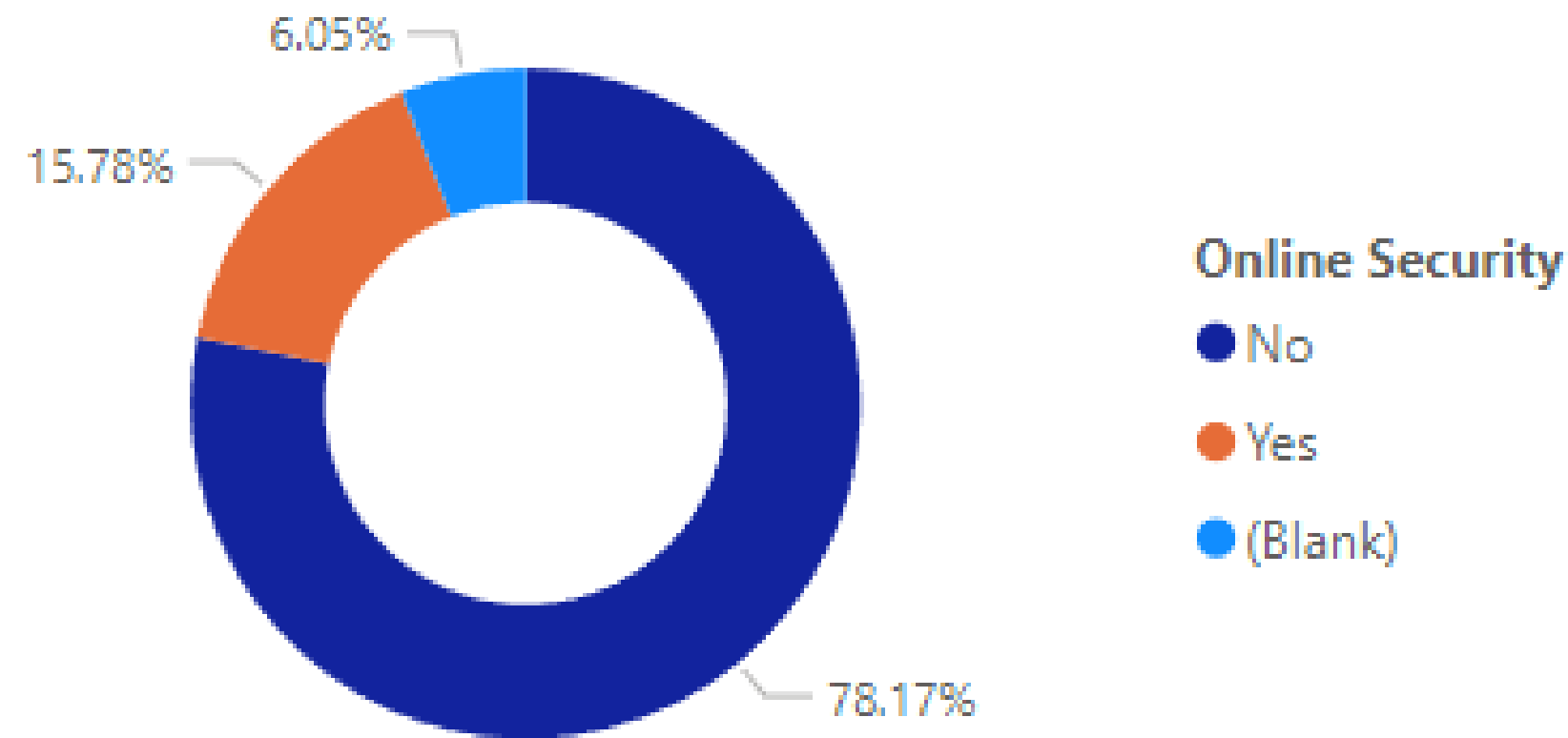# Discover the most common contract types among churned customers

Analyze the distribution of monthly charges among churned customers

Monthly Charges of Churned customers

27,189.15

Security services vs Churned Customers

Online Security
● No
● Yes
● (Blank)

6.05%
15.78%
78.17%

Identify customers who have both online security and online backup services and have not churned

Average of Monthly Charge by Customer Status

Customer Status
● Churned
● Stayed
● Joined

24.1%
41.2%
34.7%

Calculate the average monthly charges for different contract types among churned customers
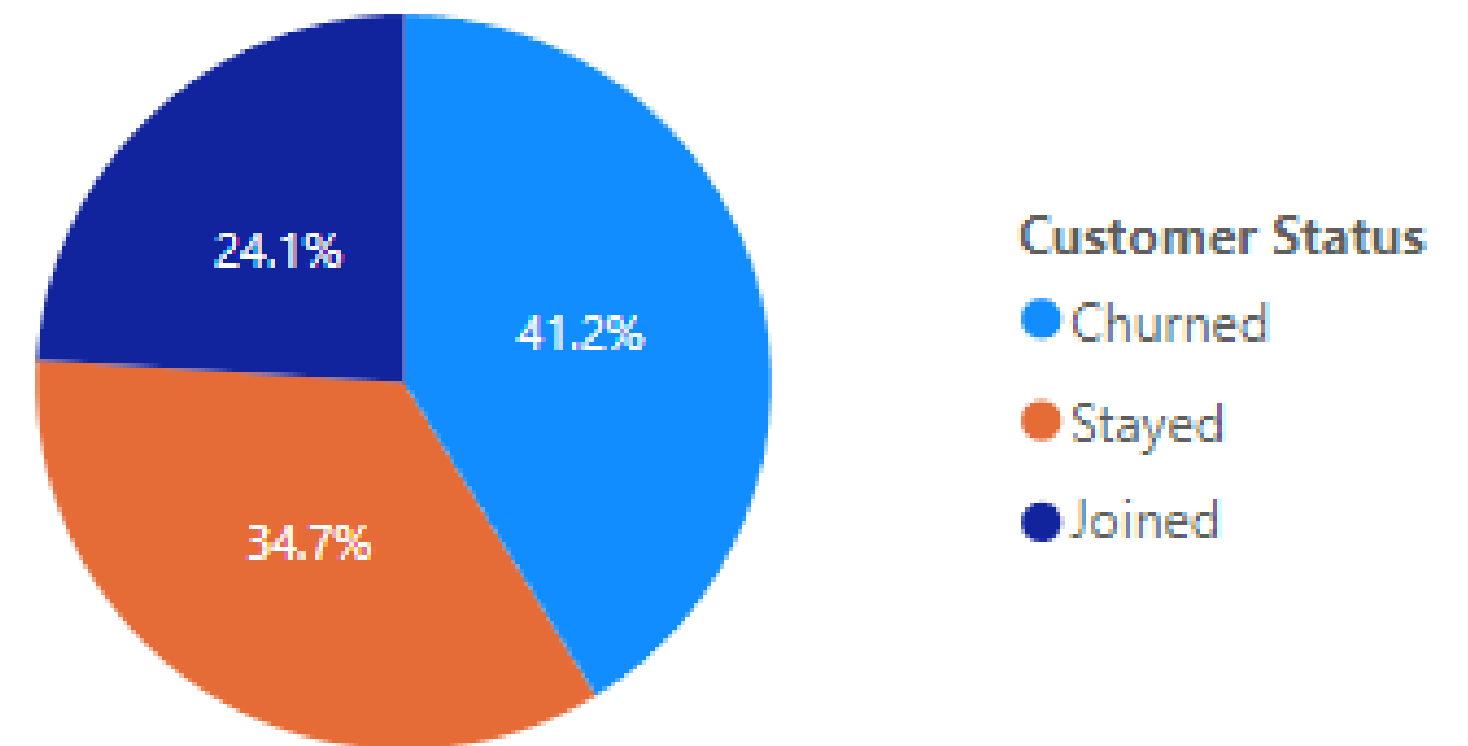
Create a query to identify the contract types that are most prone to churn

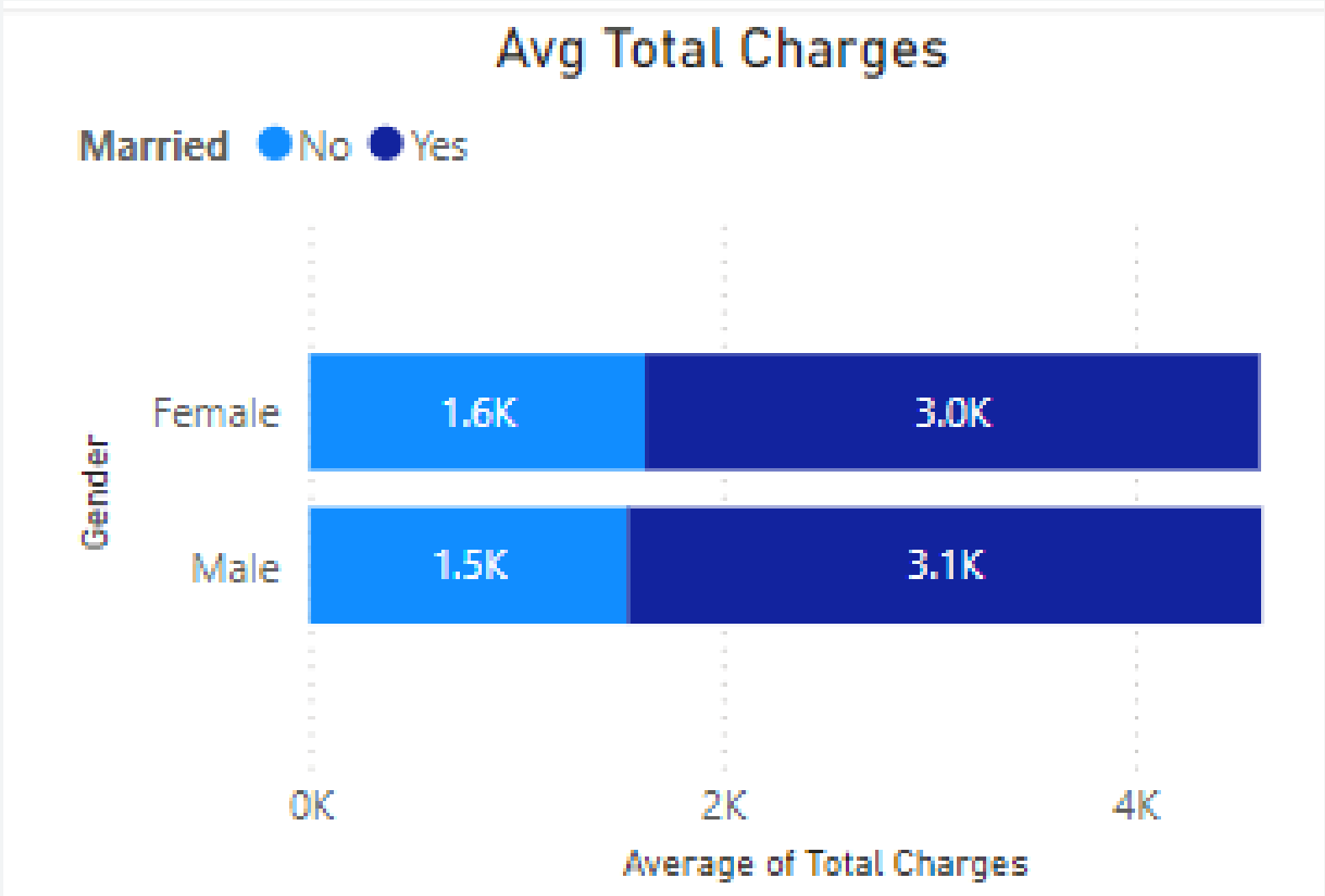| Contract	Churned	Total
Month-to-Month	1655	1655
One Year	166	166
Two Year	48	48
Total	1869	1869

Calculate the total charges distribution for churned and non-churned customers
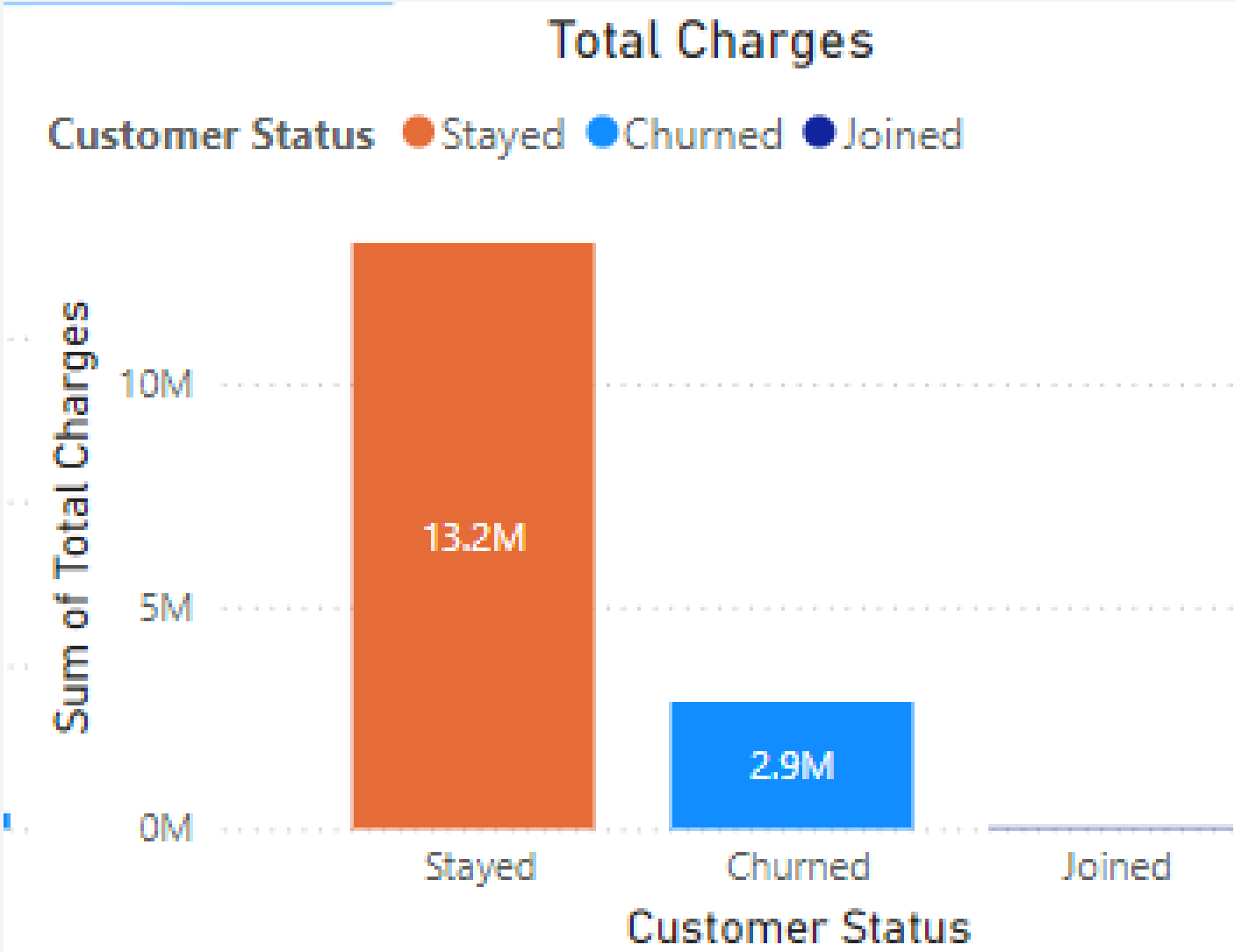
Determine the most common combinations of services among churned customers

service_combo	combo_count
No_No	957
No_Yes	363
Yes_No	157
Yes_Yes	109

Identify the average total charges for customers grouped by gender and marital status

Avg Total Charges

Married ● No ● Yes

Gender		
Female	1.6K	3.0K
Male	1.5K	3.1K

0K   2K   4K

Average of Total Charges

Calculate the average monthly charges for different age groups among churned customers

Average of Monthly Charge by Age (bins)
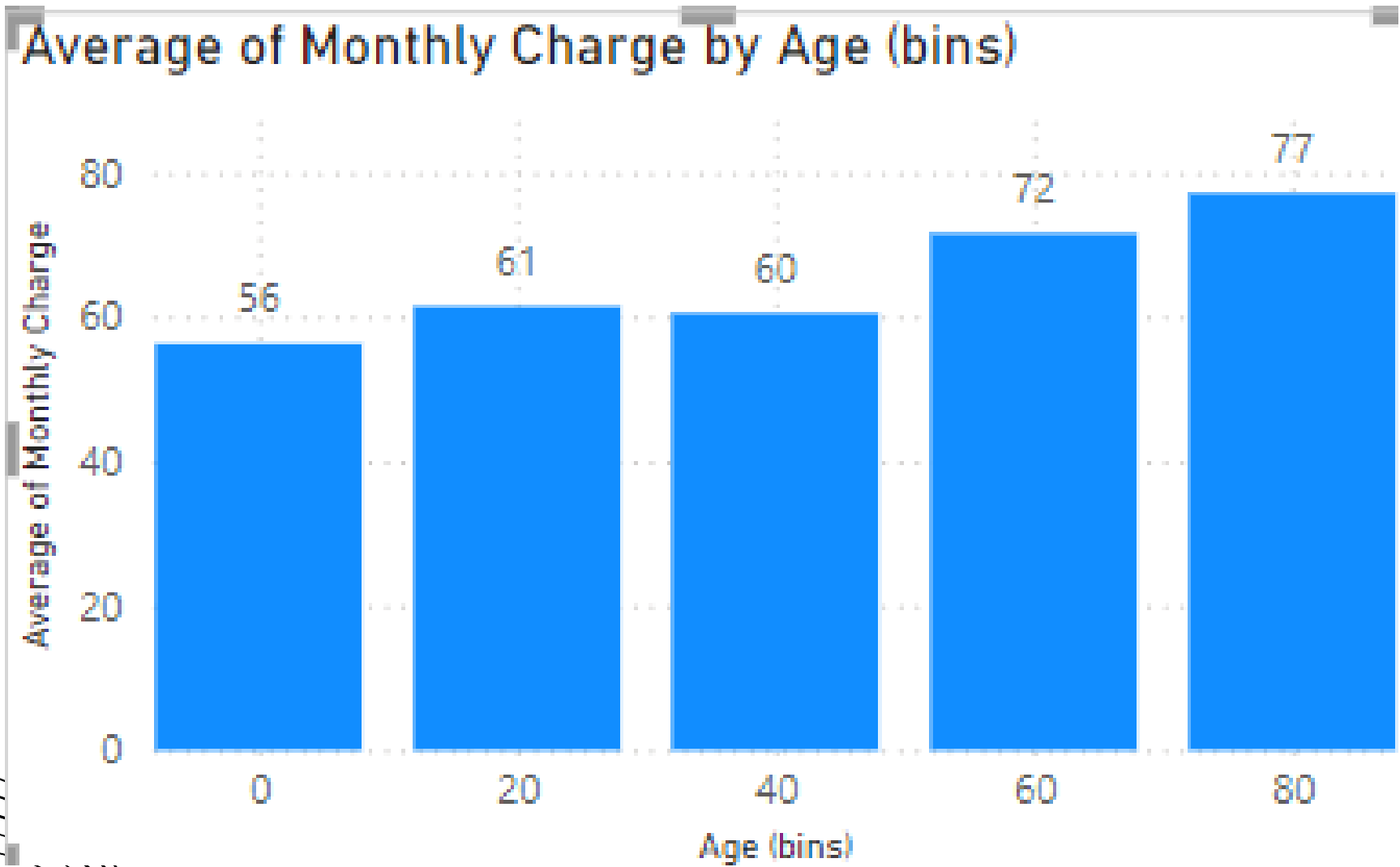
Determine the average age and total charges for customers with multiple lines and online backup

Avg Charges of customer by online_security and online_backup

4,865.71
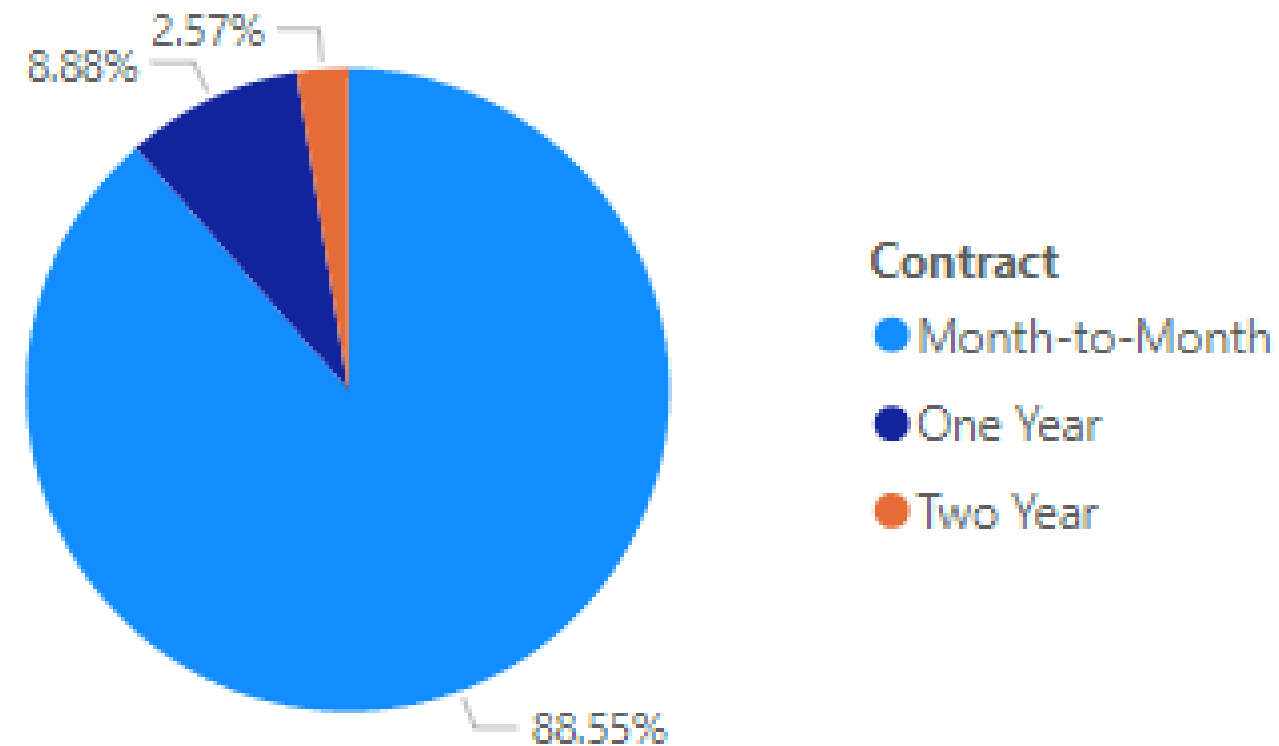
Calculate the average age and total charges for customers with different combinations of streaming services

Streaming TV	Streaming Movies	Average of Age	Average of Total Charges
No	Yes	48.07	2,545.72
Yes	Yes	48.05	4,257.08
Yes	No	47.09	2,495.65
No	No	47.02	1,416.83
Total		**47.54**	**2,727.62**

Identify the gender distribution among customers who have churned and are on yearly contracts
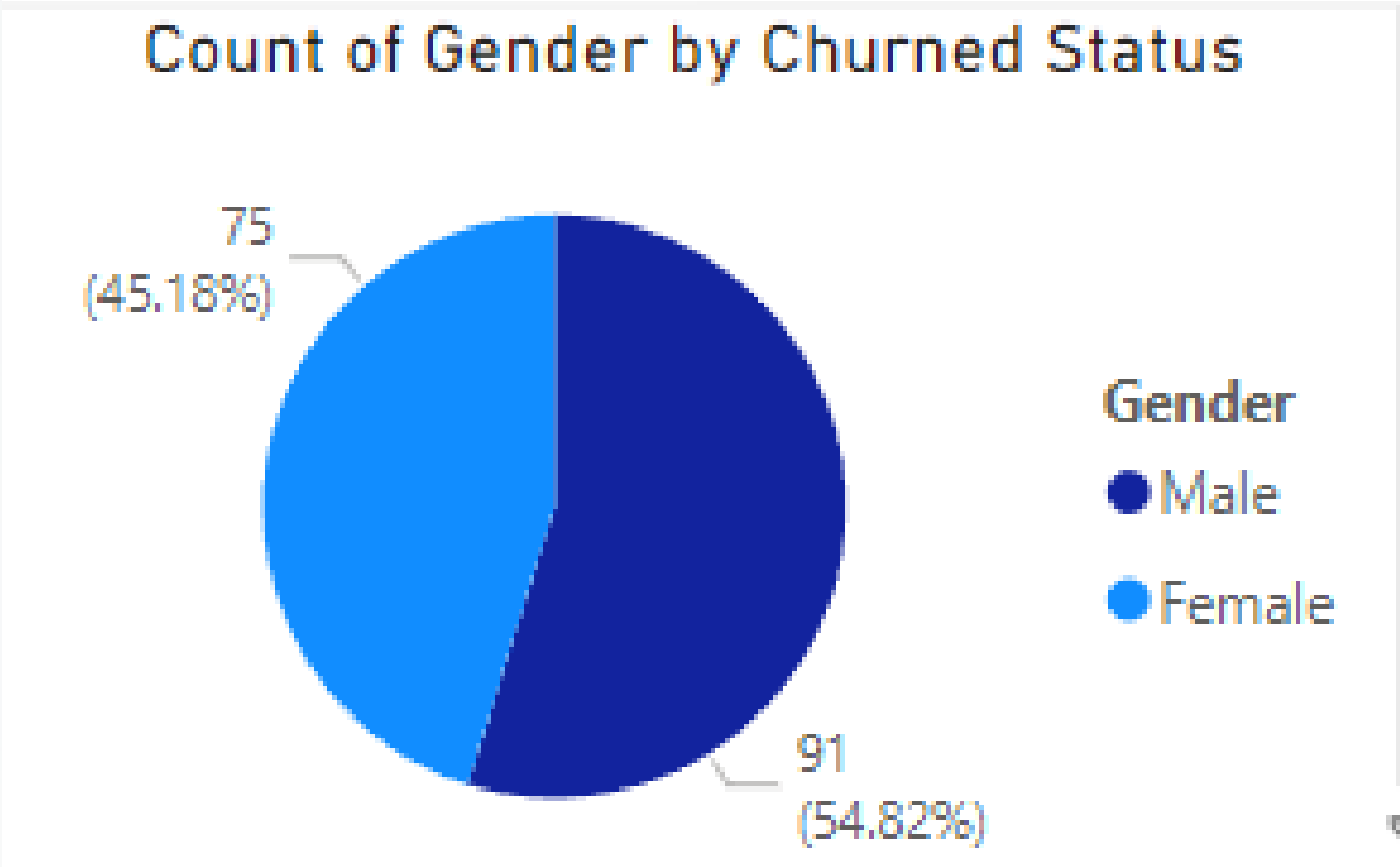
Count of Gender by Churned Status

75 (45.18%)

91 (54.82%)

Gender
● Male
● Female

Calculate the average monthly charges and total charges for customers who have churned, grouped by contract type and internet service type

Contract	Internet Service	Average of Total Charges	Average of Monthly Charge
Month-to-Month	Yes	1,487.66	71.82
One Year	Yes	3,720.32	78.04
Two Year	Yes	4,869.92	82.17
Total		**2,727.62**	**75.48**

Find the customers who have churned and are not using online services, and their average total charges

Sum of Number of Dependents	Average of Monthly Charge	Sum of Total Charges
3301	63.60	1,60,60,725.24

Calculate the average monthly charges and total charges for customers who have churned, grouped by the number of dependents

Count of Number of Dependents	Average of Monthly Charge	Sum of Total Charges
8	73.35	28,62,926.90

Create a view to find the customers with the highest monthly charges in each contract type

Sum of Monthly Charge ▼	Contract	Customer ID
118.35	One Year	8199-ZLLSA
117.80	One Year	2889-FPWRM
117.45	Month-to-Month	2302-ANTDP
116.20	Two Year	9053-JZFKV
115.65	One Year	1444-VVSGW
115.55	One Year	0201-OAMXR
114.50	Month-to-Month	4361-BKAXE
114.20	Two Year	1555-DJEQW
1,37,086.65		

Create a view to identify customers who have churned and the average monthly charges compared to the overall average

Average of Monthly Charge

Churned | 73.35

Create a view to find the customers who have churned and their cumulative total charges over time

2.86M

Sum of Total Charges

THANK YOU

Any Questions