Exploratory Data Analysis on Ascites Hepatic

On this **EDA** data regarding Ascites Hepatic, Datasets that belong to a Hepatitis patiencs were used, since it data that could be used to complete this resource.

In [207…
```
#Importing the Libraries that will be used for the Exploratory Data Analysis
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

In [243…
```
#OpenING the files that will be used on the Ascites Hepatic EDA
table1 = pd.read_csv("cirrhosis.csv")
table2 = pd.read_csv("test_dataset.csv")
table3 = pd.read_csv("train_dataset.csv")
```

Its is alwyas best to have an idea of what is in the data before starting the EDA

In [209…
```
#Checking the First 5 rows of the first Table (cirrhosis)
table1.head()
```

Out[209]:

	ID	N_Days	Status	Drug	Age	Sex	Ascites	Hepatomegaly	Spiders	Edema	Bilirubin	Choleste
0	1	400	D	D-penicillamine	21464	F	Y	Y	Y	Y	14.5	26
1	2	4500	C	D-penicillamine	20617	F	N	Y	Y	N	1.1	30
2	3	1012	D	D-penicillamine	25594	M	N	N	N	S	1.4	17
3	4	1925	D	D-penicillamine	19994	F	N	Y	Y	S	1.8	24
4	5	1504	CL	Placebo	13918	F	N	Y	Y	N	3.4	27

In [210…
```
#First 5 rows of the second Table (Test_Dataset)
table2.head()
```

Out[210]:

	ID	N_Days	Status	Drug	Age	Sex	Ascites	Hepatomegaly	Spiders	Edema	Bilirubin	Chole
0	3870	41	C	Placebo	22553	F	N	NaN	N	N	1.4	
1	3462	1811	C	D-penicillamine	16223	F	N	Y	N	N	0.3	
2	1632	954	C	D-penicillamine	27100	F	N	N	N	N	0.4	
3	722	1969	D	Placebo	17039	F	N	Y	N	N	1.2	
4	1000	2721	D	D-penicillamine	17738	F	NaN	NaN	NaN	N	3.2	

In [211…
```
#First 5 rows of the third Table (Train_Dataset)
table3.head()
```

Out[211]:

	ID	N_Days	Status	Drug	Age	Sex	Ascites	Hepatomegaly	Spiders	Edema	Bilirubin	Chole
0	7135	1654	CL	D-penicillamine	19581	F	N	N	Y	N	0.3	
1	7326	41	C	D-penicillamine	22880	F	NaN	N	NaN	N	0.3	
2	7254	297	D	NaN	27957	F	N	N	NaN	N	0.3	
3	3135	1872	C	D-penicillamine	21111	F	NaN	Y	Y	N	0.3	
4	2483	939	CL	D-penicillamine	18061	F	NaN	NaN	NaN	N	0.5	

In [212…

```
#Checking a general info of what the first data has
table1.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 418 entries, 0 to 417
Data columns (total 20 columns):
 #   Column         Non-Null Count  Dtype  
---  ------         --------------  -----  
 0   ID             418 non-null    int64  
 1   N_Days         418 non-null    int64  
 2   Status         418 non-null    object 
 3   Drug           312 non-null    object 
 4   Age            418 non-null    int64  
 5   Sex            418 non-null    object 
 6   Ascites        312 non-null    object 
 7   Hepatomegaly   312 non-null    object 
 8   Spiders        312 non-null    object 
 9   Edema          418 non-null    object 
 10  Bilirubin      418 non-null    float64
 11  Cholesterol    284 non-null    float64
 12  Albumin        418 non-null    float64
 13  Copper         310 non-null    float64
 14  Alk_Phos       312 non-null    float64
 15  SGOT           312 non-null    float64
 16  Tryglicerides  282 non-null    float64
 17  Platelets      407 non-null    float64
 18  Prothrombin    416 non-null    float64
 19  Stage          412 non-null    float64
dtypes: float64(10), int64(3), object(7)
memory usage: 65.4+ KB
```

In [213…

```
#After cheching the the rows of all the 3 datasets, the next step is to join them all, f
#Joining the 3 tables into  single one name Final_table
dfs= [table1,table2,table3]
final_table = pd.concat(dfs, ignore_index=True)
```

In [214…

```
#Checking the new Dataframe
final_table.head()
```

Out[214]:

	ID	N_Days	Status	Drug	Age	Sex	Ascites	Hepatomegaly	Spiders	Edema	Bilirubin	Cholesterol
0	1	400	D	D-penicillamine	21464	F	Y	Y	Y	Y	14.5	26
1	2	4500	C	D-penicillamine	20617	F	N	Y	Y	N	1.1	30
2	3	1012	D	D-penicillamine	25594	M	N	N	N	S	1.4	17
3	4	1925	D	D-penicillamine	19994	F	N	Y	Y	S	1.8	24

4	5	1504	CL	Placebo	13918	F	N		Y	Y	N	3.4	27

In [215…
```
#Deleting the unnecessary columns for the EDA
drops = ['ID','N_Days','Spiders','Edema','Bilirubin','Albumin', 'Copper','Alk_Phos','SGO
final_table= final_table.drop(columns=drops)
```

In [216…
```
#Chechin gthe generalised data of the Final_table
final_table.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10418 entries, 0 to 10417
Data columns (total 8 columns):
 #   Column        Non-Null Count  Dtype  
---  ------        --------------  -----  
 0   Status        10418 non-null  object 
 1   Drug          7324 non-null   object 
 2   Age           10418 non-null  int64  
 3   Sex           10418 non-null  object 
 4   Ascites       6979 non-null   object 
 5   Hepatomegaly  6783 non-null   object 
 6   Cholesterol   5748 non-null   float64
 7   Stage         7212 non-null   float64
dtypes: float64(2), int64(1), object(5)
memory usage: 651.2+ KB
```

In [217…
```
#Removing more columns and changing the data in the Age column, which had all its data i
drops2 = ['Hepatomegaly', 'Drug']
final_table= final_table.drop(columns=drops2)
final_table['Age'] = final_table['Age']/365
final_table['Age'] = final_table['Age'].astype(int)
```

In [218…
```
#Cheching for the generalised data of the Final_table
final_table.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10418 entries, 0 to 10417
Data columns (total 6 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   Status       10418 non-null  object 
 1   Age          10418 non-null  int64  
 2   Sex          10418 non-null  object 
 3   Ascites      6979 non-null   object 
 4   Cholesterol  5748 non-null   float64
 5   Stage        7212 non-null   float64
dtypes: float64(2), int64(1), object(3)
memory usage: 488.5+ KB
```

In [219…
```
#Checkin gthe first 5 Rows
final_table.head()
```

Out[219]:

	Status	Age	Sex	Ascites	Cholesterol	Stage
0	D	58	F	Y	261.0	4.0
1	C	56	F	N	302.0	3.0
2	D	70	M	N	176.0	4.0
3	D	54	F	N	244.0	4.0
4	CL	38	F	N	279.0	3.0

In [220…
```
final_table['Ascites'].groupby(final_table['Sex']).describe()
```

Out[220]:

Sex	count	unique	top	freq
F	6012	2	N	5292
M	967	2	N	845

In [221…
```
final_table['Ascites']= final_table['Ascites'].map({'Y':True, 'N':False})
final_table= final_table.dropna(axis=0)
```

In [222…
```
final_table['Sex']= final_table['Sex'].map({'M':1, 'F':0})
final_table= final_table.dropna(axis=0)
```

Note: For this particular **EDA** no duplicastes were eliminated because, duplicates are acepted, due to the fact that two or more pacients can expeience the same issues

Below statistics techniques were used to find the correlaction between the columns

In [223…
```
#Importing Stats libraries
#
from scipy import stats

correlation_coefficient, p_value = stats.pointbiserialr(final_table['Ascites'], final_ta

print(f'Point-Biserial Correlation Coefficient: {correlation_coefficient}')
print(f'P-Value: {p_value}')

if p_value < 0.05:  # You can choose a significance level (e.g., 0.05) for hypothesis te
    print('There is a significant correlation.')
else:
    print('There is no significant correlation.')
```

```
Point-Biserial Correlation Coefficient: 0.018042444203424293
P-Value: 0.3391218850784023
There is no significant correlation.
```

In [224…
```
from scipy import stats

correlation_coefficient, p_value = stats.pointbiserialr(final_table['Ascites'], final_ta

print(f'Point-Biserial Correlation Coefficient: {correlation_coefficient}')
print(f'P-Value: {p_value}')

if p_value < 0.05:  # You can choose a significance level (e.g., 0.05) for hypothesis te
    print('There is a significant correlation.')
else:
    print('There is no significant correlation.')
```

```
Point-Biserial Correlation Coefficient: 0.003878705894147386
P-Value: 0.8371965852391984
There is no significant correlation.
```

In [225…
```
correlation_coefficient, p_value = stats.pointbiserialr(final_table['Sex'], final_table[

print(f'Point-Biserial Correlation Coefficient: {correlation_coefficient}')
print(f'P-Value: {p_value}')

if p_value < 0.05:  # You can choose a significance level (e.g., 0.05) for hypothesis te
```

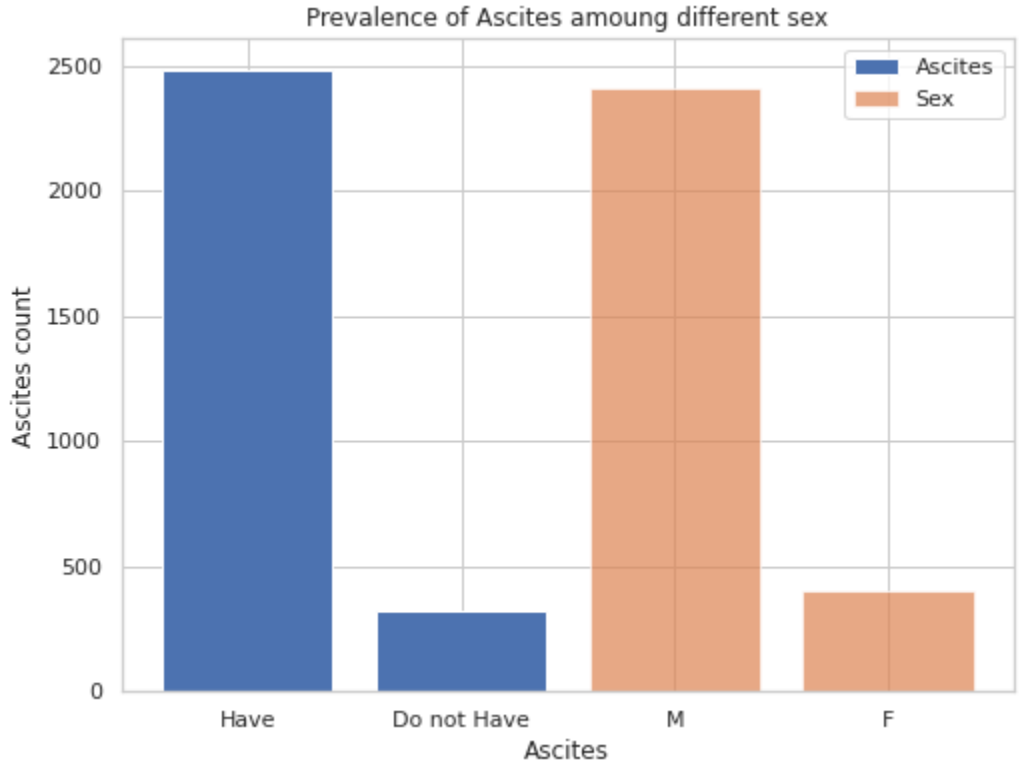
```
    print('There is a significant correlation.')
else:
    print('There is no significant correlation.')
```

```
Point-Biserial Correlation Coefficient: -0.016894286366949427
P-Value: 0.3707536682849071
There is no significant correlation.
```

After realizing that isng a significant correlaction amoung the column we presumed to check the prevalance of **Ascites** amoung the different Sex, age and Stages of Hepatitis

In [226…

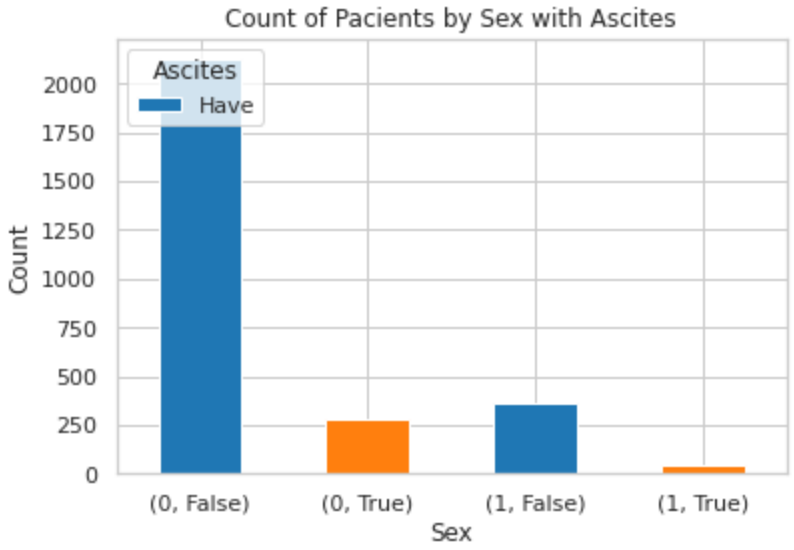
```
count1 = final_table['Ascites'].value_counts()
count2 = final_table['Sex'].value_counts()


 #Create a bar chart to compare the two columns
fig, ax = plt.subplots(figsize=(8, 6))

# Plot the counts for Boolean_Column1
ax.bar(['Have', 'Do not Have'], count1, label='Ascites')

# Plot the counts for Boolean_Column2
ax.bar(['M', 'F'], count2, label='Sex', alpha=0.7)  # Use alpha to make bars slightly tr

# Add labels and legend
ax.set_xlabel('Ascites')
ax.set_ylabel('Ascites count')
ax.set_title('Prevalence of Ascites amoung different sex')
ax.legend()

plt.show()
```



In [227…

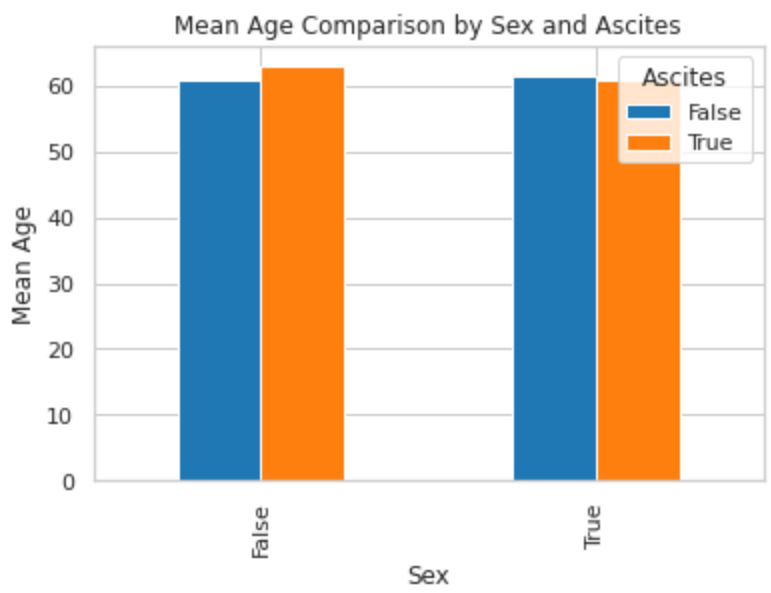
```
# Group by 'Column1' and count occurrences of True and False in 'Column2'
counts = final_table.groupby('Sex')['Ascites'].value_counts()


# Define custom colors for the bars
colors = ['#1f77b4', '#ff7f0e']  # Blue and orange
```

```
# Create a bar chart
ax = counts.plot(kind='bar', stacked=True, color=colors)

# Customize the chart labels and legend
plt.xlabel('Sex')
plt.ylabel('Count')
plt.title('Count of Pacients by Sex with Ascites')
plt.xticks(rotation=0)
plt.legend(title='Ascites', labels=['Have', 'Dont Have'], loc='upper left')

# Show the chart
plt.show()
```



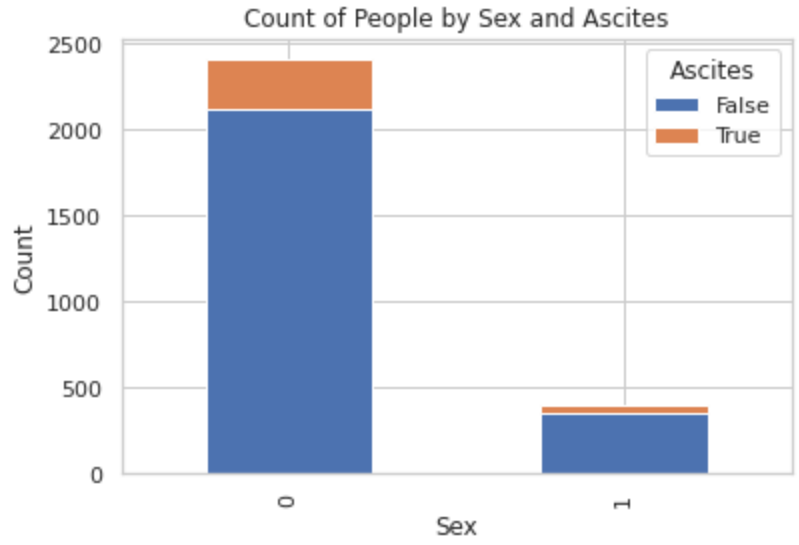
In [228…

```
# Group by 'ColumnB' and 'ColumnA', and calculate the mean age for each group
grouped = final_table.groupby(['Ascites', 'Sex'])['Age'].mean().unstack(fill_value=0)

# Define custom colors for the bars
colors = ['#1f77b4', '#ff7f0e']  # Blue and orange

# Create a bar chart with custom colors
ax = grouped.plot(kind='bar', color=colors)

# Customize the chart labels and legend
plt.xlabel('Sex')
plt.ylabel('Mean Age')
plt.title('Mean Age Comparison by Sex and Ascites')
plt.legend(title='Ascites', labels=['False', 'True'], loc='upper right')

# Show the chart
plt.show()
```



In [229…

```
# Group by 'Sex' and 'ColumnB' and count the number of rows in each group
grouped = final_table.groupby(['Sex', 'Ascites']).size().unstack(fill_value=0)

# Create a bar chart
ax = grouped.plot(kind='bar', stacked=True)

# Customize the chart labels and legend
plt.xlabel('Sex')
plt.ylabel('Count')
plt.title('Count of People by Sex and Ascites')
plt.legend(title='Ascites', labels=['False', 'True'], loc='upper right')

# Show the chart
plt.show()
```



In [230…

```
final_table.value_counts()
```

Out[230]:

Status	Age	Sex	Ascites	Cholesterol	Stage	
C	78	0	False	120.0	4.0	14
D	78	0	False	120.0	2.0	5
C	76	0	False	120.0	4.0	4
	54	0	False	120.0	4.0	4
D	78	0	False	120.0	3.0	4
C	78	0	False	120.0	2.0	3
D	72	0	False	371.0	4.0	3
C	70	0	False	397.0	4.0	3
	78	0	False	324.0	4.0	3

				349.0	4.0	3
D	78	0	False	120.0	4.0	3
				315.0	4.0	2
C	57	0	False	314.0	4.0	2
D	78	0	False	290.0	2.0	2
C	78	0	False	295.0	4.0	2
D	78	0	False	304.0	2.0	2
C	65	0	False	120.0	4.0	2
	55	0	False	311.0	4.0	2
	77	0	False	326.0	2.0	2
D	50	0	False	386.0	4.0	2
	77	0	False	120.0	4.0	2
	78	0	False	333.0	2.0	2
				334.0	4.0	2
C	50	0	False	120.0	4.0	2
	44	0	False	303.0	2.0	2
	78	0	False	313.0	3.0	2
		1	False	120.0	3.0	2
		0	False	317.0	1.0	2
	69	0	False	331.0	4.0	2
	59	0	False	120.0	4.0	2
D	71	0	False	120.0	1.0	2
C	78	1	False	366.0	4.0	2
		0	False	186.0	4.0	2
	64	0	False	120.0	3.0	2
D	59	0	False	326.0	4.0	2
C	78	0	False	193.0	4.0	2
				194.0	4.0	2
D	59	0	False	338.0	2.0	2
	78	0	False	182.0	4.0	2
				189.0	4.0	2
C	78	0	False	136.0	2.0	2
	63	0	False	345.0	2.0	2
	48	0	False	120.0	4.0	2
	63	0	False	339.0	4.0	2
	69	0	False	120.0	4.0	2
	68	0	False	120.0	3.0	2
	78	0	False	120.0	1.0	2
D	78	0	False	351.0	4.0	2
C	64	0	False	319.0	4.0	2
	78	0	False	333.0	4.0	2
				331.0	4.0	2
D	61	1	False	120.0	4.0	2
C	78	0	False	344.0	4.0	2
				355.0	4.0	2
	67	0	False	120.0	4.0	2
D	69	0	False	320.0	1.0	2
C	78	0	False	336.0	2.0	2
				335.0	4.0	2
	70	0	False	349.0	4.0	2
	56	0	False	302.0	3.0	2
D	78	0	True	120.0	4.0	2
C	78	0	False	329.0	4.0	2
D	56	0	False	120.0	2.0	2
C	78	0	False	390.0	4.0	2
D	62	0	False	120.0	4.0	2
C	72	0	False	120.0	4.0	2
D	55	0	False	120.0	4.0	2
C	71	0	False	278.0	4.0	2
D	54	0	False	324.0	4.0	2
C	78	0	False	356.0	4.0	2
D	46	0	False	334.0	4.0	1
	48	0	False	319.0	3.0	1
	46	0	False	333.0	4.0	1
				332.0	4.0	1
	48	0	False	319.0	4.0	1

				343.0	3.0	1
	47	0	False	436.0	4.0	1
	46	0	False	257.0	3.0	1
				331.0	2.0	1
				300.0	4.0	1
	48	0	False	354.0	4.0	1
	46	0	False	296.0	4.0	1
	48	0	False	355.0	3.0	1
	45	1	True	414.0	4.0	1
	48	0	False	379.0	1.0	1
				390.0	3.0	1
	45	1	False	317.0	3.0	1
	48	0	False	404.0	2.0	1
			True	188.0	4.0	1
	45	1	False	308.0	3.0	1
	48	0	True	218.0	4.0	1
				296.0	3.0	1
	45	1	False	162.0	4.0	1
	48	0	False	317.0	4.0	1
				314.0	3.0	1
	46	0	False	336.0	4.0	1
	47	0	True	259.0	2.0	1
			False	137.0	2.0	1
				163.0	4.0	1
				190.0	2.0	1
			True	350.0	4.0	1
	45	1	False	156.0	3.0	1
	47	0	False	262.0	4.0	1
				323.0	1.0	1
	46	0	False	341.0	2.0	1
	47	0	True	120.0	1.0	1
			False	326.0	4.0	1
				333.0	4.0	1
				522.0	4.0	1
				344.0	2.0	1
				346.0	3.0	1
	46	1	False	427.0	3.0	1
		0	True	362.0	4.0	1
	47	1	False	326.0	3.0	1
	46	0	True	304.0	4.0	1
			False	932.0	3.0	1
	48	0	False	178.0	2.0	1
	46	0	False	773.0	4.0	1
				535.0	4.0	1
				405.0	2.0	1
	48	0	False	188.0	2.0	1
				212.0	4.0	1
				215.0	4.0	1
				312.0	1.0	1
	46	0	False	376.0	4.0	1
				372.0	3.0	1
				342.0	4.0	1
	47	0	False	359.0	4.0	1
				228.0	3.0	1
C	26	0	False	205.0	4.0	1
D	45	1	False	139.0	2.0	1
	41	0	False	459.0	2.0	1
				240.0	4.0	1
				260.0	4.0	1
				296.0	2.0	1
				312.0	4.0	1
				331.0	4.0	1
				345.0	3.0	1
				356.0	3.0	1
				374.0	3.0	1
				629.0	3.0	1

45	0	True	309.0	4.0	1
41	0	False	1276.0	3.0	1
		True	366.0	2.0	1
42	0	False	179.0	3.0	1
			206.0	4.0	1
			222.0	4.0	1
			229.0	4.0	1
			230.0	4.0	1
			322.0	4.0	1
41	0	False	224.0	4.0	1
			212.0	1.0	1
40	0	True	338.0	4.0	1
		False	329.0	3.0	1
38	0	False	382.0	4.0	1
			486.0	3.0	1
		True	349.0	3.0	1
			360.0	4.0	1
	1	True	281.0	2.0	1
39	0	False	264.0	4.0	1
			301.0	2.0	1
			316.0	1.0	1
			332.0	4.0	1
			333.0	4.0	1
		True	286.0	4.0	1
			288.0	4.0	1
	1	False	120.0	2.0	1
40	0	False	120.0	4.0	1
			292.0	3.0	1
			314.0	4.0	1
			318.0	4.0	1
42	0	False	352.0	2.0	1
			370.0	4.0	1
			418.0	4.0	1
44	0	False	350.0	3.0	1
			1775.0	3.0	1
		True	222.0	4.0	1
48	1	False	251.0	2.0	1
44	0	True	315.0	2.0	1
	1	False	161.0	1.0	1
			202.0	3.0	1
			456.0	2.0	1
45	0	False	322.0	3.0	1
			325.0	4.0	1
			334.0	2.0	1
			337.0	1.0	1
			338.0	1.0	1
			342.0	2.0	1
			354.0	4.0	1
			370.0	1.0	1
			482.0	3.0	1
		True	146.0	3.0	1
44	0	False	408.0	2.0	1
			349.0	3.0	1
42	0	False	562.0	2.0	1
44	0	False	322.0	4.0	1
42	0	False	682.0	4.0	1
	1	True	405.0	4.0	1
43	0	False	120.0	3.0	1
			195.0	1.0	1
			249.0	3.0	1
			254.0	4.0	1
			303.0	2.0	1
			320.0	4.0	1
			322.0	2.0	1
			365.0	4.0	1
		True	332.0	4.0	1

			674.0	4.0	1
	1	False	268.0	4.0	1
			355.0	3.0	1
		True	205.0	4.0	1
44	0	False	146.0	4.0	1
			274.0	4.0	1
		True	307.0	3.0	1
49	0	False	950.0	4.0	1
48	1	False	376.0	4.0	1
53	0	False	257.0	4.0	1
			160.0	3.0	1
			171.0	3.0	1
			178.0	4.0	1
			201.0	4.0	1
			208.0	4.0	1
			226.0	1.0	1
			233.0	3.0	1
			259.0	4.0	1
52	1	True	408.0	4.0	1
53	0	False	260.0	3.0	1
			280.0	3.0	1
			313.0	3.0	1
			319.0	2.0	1
			324.0	4.0	1
			336.0	4.0	1
			340.0	3.0	1
			120.0	1.0	1
52	1	False	361.0	1.0	1
53	0	False	383.0	4.0	1
52	0	False	556.0	3.0	1
			364.0	4.0	1
			370.0	4.0	1
			382.0	4.0	1
			386.0	4.0	1
			400.0	3.0	1
			408.0	2.0	1
			422.0	4.0	1
			1128.0	3.0	1
	1	False	259.0	3.0	1
	0	False	1600.0	3.0	1
		True	184.0	3.0	1
			230.0	4.0	1
			301.0	3.0	1
			310.0	3.0	1
			380.0	3.0	1
			1092.0	4.0	1
53	0	False	344.0	4.0	1
			409.0	4.0	1
52	0	False	357.0	4.0	1
54	0	True	175.0	4.0	1
		False	344.0	4.0	1
			362.0	2.0	1
			367.0	4.0	1
			442.0	3.0	1
			636.0	3.0	1
			1024.0	4.0	1
		True	120.0	4.0	1
			339.0	2.0	1
		False	339.0	1.0	1
	1	False	146.0	4.0	1
			197.0	1.0	1
			324.0	2.0	1
			347.0	2.0	1
			411.0	4.0	1
55	0	False	143.0	4.0	1
			160.0	4.0	1

54	0	False	344.0	2.0	1
			338.0	2.0	1
53	0	True	120.0	2.0	1
54	0	False	120.0	2.0	1
53	0	True	269.0	4.0	1
			404.0	4.0	1
	1	False	196.0	4.0	1
			324.0	4.0	1
			363.0	2.0	1
			373.0	4.0	1
			403.0	4.0	1
54	0	False	120.0	3.0	1
			337.0	3.0	1
			120.0	4.0	1
			130.0	2.0	1
			231.0	4.0	1
			241.0	3.0	1
			244.0	4.0	1
			301.0	4.0	1
			306.0	4.0	1
52	0	False	360.0	1.0	1
			355.0	3.0	1
49	0	False	141.0	4.0	1
50	0	False	127.0	2.0	1
49	0	False	777.0	2.0	1
38	0	False	371.0	4.0	1
49	0	True	382.0	3.0	1
	1	False	120.0	2.0	1
			339.0	4.0	1
			418.0	3.0	1
50	0	False	120.0	4.0	1
			162.0	3.0	1
49	0	False	482.0	2.0	1
50	0	False	209.0	3.0	1
			315.0	4.0	1
			335.0	4.0	1
			336.0	3.0	1
		True	120.0	2.0	1
			374.0	4.0	1
			451.0	4.0	1
49	0	False	652.0	3.0	1
			416.0	4.0	1
50	1	False	614.0	1.0	1
49	0	False	308.0	2.0	1
			155.0	4.0	1
			162.0	4.0	1
			164.0	2.0	1
			182.0	4.0	1
			197.0	4.0	1
			244.0	3.0	1
			283.0	4.0	1
			342.0	4.0	1
			388.0	2.0	1
			347.0	4.0	1
			348.0	4.0	1
			354.0	2.0	1
			360.0	3.0	1
			363.0	3.0	1
			364.0	4.0	1
			366.0	4.0	1
50	1	False	319.0	4.0	1
51	0	False	122.0	4.0	1
52	0	False	342.0	2.0	1
			181.0	2.0	1
51	1	False	175.0	1.0	1
			178.0	4.0	1

				250.0	3.0	1
				355.0	3.0	1
				426.0	3.0	1
	52	0	False	149.0	4.0	1
				179.0	4.0	1
				274.0	4.0	1
	51	0	True	192.0	4.0	1
	52	0	False	276.0	2.0	1
				295.0	4.0	1
				311.0	2.0	1
					4.0	1
				314.0	2.0	1
				317.0	1.0	1
				332.0	4.0	1
	51	1	False	166.0	4.0	1
		0	False	558.0	4.0	1
				131.0	4.0	1
				338.0	4.0	1
				173.0	4.0	1
				176.0	4.0	1
				179.0	4.0	1
				203.0	4.0	1
				210.0	3.0	1
				221.0	2.0	1
				332.0	2.0	1
				342.0	4.0	1
				466.0	3.0	1
				352.0	2.0	1
				374.0	4.0	1
				379.0	4.0	1
				392.0	4.0	1
				394.0	4.0	1
				399.0	4.0	1
				462.0	2.0	1
	38	0	False	374.0	4.0	1
	35	0	False	808.0	3.0	1
	38	0	False	260.0	4.0	1
CL	42	0	False	393.0	4.0	1
	43	0	False	375.0	3.0	1
		1	False	361.0	2.0	1
	44	0	False	356.0	3.0	1
				391.0	2.0	1
		1	True	354.0	4.0	1
	45	0	False	120.0	2.0	1
				162.0	2.0	1
				214.0	4.0	1
				340.0	4.0	1
			True	177.0	3.0	1
				246.0	4.0	1
		1	False	334.0	2.0	1
	46	0	False	348.0	4.0	1
	47	0	False	121.0	4.0	1
				294.0	3.0	1
				311.0	2.0	1
				316.0	4.0	1
	43	0	False	317.0	4.0	1
	42	0	False	286.0	1.0	1
D	38	0	False	120.0	2.0	1
CL	42	0	False	276.0	4.0	1
	34	0	False	432.0	4.0	1
				464.0	3.0	1
	35	1	False	325.0	3.0	1
				646.0	3.0	1
	36	0	False	450.0	2.0	1
	37	0	False	312.0	2.0	1
	38	0	False	279.0	3.0	1

				312.0	4.0	1
	39	0	False	227.0	3.0	1
	40	0	False	201.0	2.0	1
				339.0	4.0	1
		1	False	331.0	4.0	1
	41	0	False	217.0	4.0	1
				316.0	4.0	1
				528.0	3.0	1
				1712.0	3.0	1
		1	True	201.0	2.0	1
	47	0	True	338.0	2.0	1
	48	0	False	158.0	4.0	1
				220.0	4.0	1
				310.0	2.0	1
	54	1	False	216.0	4.0	1
				326.0	4.0	1
	55	0	False	138.0	4.0	1
				148.0	3.0	1
				262.0	4.0	1
			True	349.0	3.0	1
		1	False	408.0	4.0	1
	56	0	False	163.0	1.0	1
				294.0	2.0	1
				297.0	4.0	1
				376.0	4.0	1
				392.0	2.0	1
			True	305.0	4.0	1
				346.0	3.0	1
		1	False	275.0	4.0	1
	57	0	False	219.0	4.0	1
	58	0	False	176.0	2.0	1
	54	0	False	393.0	4.0	1
				312.0	3.0	1
				131.0	1.0	1
	51	0	True	184.0	3.0	1
	48	0	False	325.0	4.0	1
				339.0	4.0	1
				340.0	4.0	1
				397.0	4.0	1
	49	0	False	264.0	1.0	1
	50	0	False	386.0	4.0	1
	51	0	False	120.0	3.0	1
	52	1	False	365.0	2.0	1
	53	0	True	347.0	4.0	1
			False	168.0	3.0	1
				279.0	4.0	1
				347.0	4.0	1
				350.0	4.0	1
				357.0	4.0	1
				436.0	1.0	1
			True	314.0	4.0	1
	34	0	False	420.0	4.0	1
	33	1	False	286.0	2.0	1
	32	0	False	387.0	4.0	1
C	78	0	True	400.0	3.0	1
				209.0	3.0	1
				218.0	4.0	1
				284.0	1.0	1
				292.0	4.0	1
				304.0	4.0	1
				307.0	4.0	1
				308.0	4.0	1
				311.0	4.0	1
				317.0	4.0	1
				322.0	4.0	1
				326.0	4.0	1

				328.0	4.0	1
				338.0	4.0	1
				349.0	2.0	1
				350.0	4.0	1
				351.0	4.0	1
				352.0	3.0	1
				208.0	2.0	1
				176.0	4.0	1
				120.0	4.0	1
			False	438.0	4.0	1
				411.0	4.0	1
				416.0	4.0	1
				419.0	4.0	1
				420.0	3.0	1
				423.0	4.0	1
				424.0	4.0	1
				431.0	1.0	1
				443.0	3.0	1
			True	120.0	2.0	1
			False	496.0	4.0	1
				524.0	4.0	1
				530.0	4.0	1
				553.0	4.0	1
				663.0	2.0	1
				742.0	3.0	1
			True	120.0	1.0	1
				378.0	3.0	1
		1	False	120.0	1.0	1
CL	30	0	False	139.0	1.0	1
C	78	1	False	120.0	2.0	1
				331.0	3.0	1
				333.0	3.0	1
				344.0	4.0	1
				345.0	2.0	1
				351.0	4.0	1
				353.0	2.0	1
				371.0	4.0	1
				387.0	2.0	1
				388.0	2.0	1
				397.0	4.0	1
				398.0	3.0	1
				454.0	4.0	1
				636.0	4.0	1
				1536.0	1.0	1
			True	140.0	4.0	1
				243.0	4.0	1
CL	27	0	False	359.0	1.0	1
C	78	1	False	328.0	4.0	1
				317.0	4.0	1
				315.0	4.0	1
				174.0	4.0	1
				120.0	4.0	1
				127.0	1.0	1
				141.0	4.0	1
				145.0	4.0	1
				146.0	4.0	1
				147.0	3.0	1
				172.0	4.0	1
				187.0	4.0	1
				308.0	1.0	1
				189.0	4.0	1
				205.0	4.0	1
				254.0	4.0	1
				278.0	4.0	1
				287.0	2.0	1
				296.0	2.0	1

				301.0	4.0	1
CL	58	0	False	265.0	2.0	1
				338.0	2.0	1
				499.0	4.0	1
D	29	0	False	291.0	2.0	1
CL	78	0	False	337.0	2.0	1
				338.0	2.0	1
				351.0	2.0	1
				355.0	3.0	1
				356.0	1.0	1
				362.0	4.0	1
				363.0	3.0	1
				419.0	4.0	1
			True	222.0	4.0	1
				352.0	2.0	1
		1	False	120.0	4.0	1
				156.0	4.0	1
				230.0	2.0	1
				298.0	3.0	1
				318.0	1.0	1
D	26	0	False	120.0	4.0	1
				348.0	4.0	1
CL	78	0	False	335.0	4.0	1
				332.0	2.0	1
				313.0	2.0	1
				202.0	3.0	1
	77	1	False	358.0	4.0	1
				360.0	4.0	1
			True	231.0	4.0	1
	78	0	False	148.0	4.0	1
				166.0	4.0	1
				171.0	2.0	1
				175.0	3.0	1
				218.0	4.0	1
				308.0	2.0	1
				225.0	4.0	1
				230.0	4.0	1
				264.0	3.0	1
				275.0	3.0	1
				296.0	4.0	1
				298.0	4.0	1
				304.0	2.0	1
D	28	0	True	402.0	3.0	1
	29	0	True	352.0	4.0	1
CL	77	0	False	297.0	4.0	1
D	29	1	False	282.0	4.0	1
	36	0	False	381.0	4.0	1
				383.0	4.0	1
				446.0	2.0	1
				608.0	4.0	1
				619.0	3.0	1
			True	351.0	2.0	1
		1	True	210.0	4.0	1
	37	0	False	173.0	2.0	1
				196.0	4.0	1
				207.0	4.0	1
				290.0	4.0	1
				299.0	3.0	1
				319.0	1.0	1
				345.0	3.0	1
				410.0	2.0	1
				674.0	3.0	1
			True	410.0	1.0	1
	36	0	False	310.0	2.0	1
				120.0	4.0	1
	55	0	False	223.0	4.0	1

	33	1	False	660.0	2.0	1
	30	0	False	456.0	4.0	1
				1015.0	3.0	1
		1	False	369.0	4.0	1
	32	0	False	334.0	4.0	1
	33	0	False	151.0	4.0	1
				264.0	1.0	1
				498.0	2.0	1
	34	0	False	348.0	3.0	1
	35	0	False	408.0	3.0	1
	34	0	False	349.0	2.0	1
				353.0	4.0	1
	35	0	False	158.0	2.0	1
				219.0	3.0	1
				227.0	4.0	1
				346.0	2.0	1
				402.0	4.0	1
CL	77	0	False	309.0	3.0	1
	76	0	False	382.0	4.0	1
	59	0	False	171.0	3.0	1
	67	0	False	141.0	4.0	1
	63	0	False	330.0	4.0	1
				338.0	4.0	1
				345.0	4.0	1
				367.0	4.0	1
				390.0	4.0	1
			True	681.0	4.0	1
	64	0	False	323.0	4.0	1
				390.0	3.0	1
			True	358.0	4.0	1
		1	False	383.0	4.0	1
	65	0	False	120.0	1.0	1
				143.0	2.0	1
				1361.0	3.0	1
			True	294.0	4.0	1
	66	0	False	201.0	3.0	1
				258.0	2.0	1
				307.0	3.0	1
	63	0	False	273.0	1.0	1
				192.0	4.0	1
	62	1	True	228.0	3.0	1
	60	0	False	271.0	3.0	1
	59	0	False	302.0	3.0	1
				313.0	3.0	1
				330.0	4.0	1
				336.0	3.0	1
				394.0	4.0	1
			True	316.0	2.0	1
	60	0	False	196.0	4.0	1
				306.0	3.0	1
	62	0	False	329.0	3.0	1
	60	0	False	352.0	4.0	1
				359.0	3.0	1
	61	0	True	327.0	4.0	1
	62	0	False	120.0	4.0	1
				169.0	2.0	1
				260.0	4.0	1
				318.0	3.0	1
	66	0	False	348.0	2.0	1
	67	0	False	329.0	3.0	1
	76	0	False	331.0	3.0	1
	67	0	False	332.0	4.0	1
	70	1	False	371.0	4.0	1
	71	0	False	297.0	3.0	1
				393.0	4.0	1
	72	0	False	336.0	4.0	1

				355.0	4.0	1
			True	123.0	4.0	1
		73	0	False	120.0	4.0	1
					189.0	4.0	1
					270.0	4.0	1
					398.0	4.0	1
		74	0	False	324.0	4.0	1
					370.0	1.0	1
					893.0	4.0	1
				True	241.0	2.0	1
					375.0	4.0	1
		75	0	False	312.0	2.0	1
			1	False	312.0	3.0	1
		70	0	True	480.0	1.0	1
				False	360.0	2.0	1
					339.0	4.0	1
		69	0	False	362.0	2.0	1
		67	1	False	323.0	4.0	1
		68	0	False	358.0	4.0	1
					505.0	2.0	1
				True	226.0	4.0	1
		69	0	False	120.0	2.0	1
					175.0	4.0	1
					295.0	4.0	1
					1000.0	4.0	1
		70	0	False	295.0	3.0	1
		69	1	False	338.0	4.0	1
					426.0	4.0	1
		70	0	False	120.0	3.0	1
						4.0	1
					171.0	3.0	1
					188.0	4.0	1
					214.0	4.0	1
D		55	0	False	198.0	4.0	1
					392.0	4.0	1
					263.0	4.0	1
		74	0	False	169.0	3.0	1
		73	1	False	120.0	2.0	1
					151.0	2.0	1
					316.0	2.0	1
					330.0	2.0	1
					350.0	2.0	1
				True	339.0	4.0	1
		74	0	False	120.0	4.0	1
					153.0	4.0	1
					179.0	4.0	1
		76	0	False	232.0	2.0	1
		74	0	False	211.0	4.0	1
					279.0	3.0	1
					294.0	4.0	1
					303.0	4.0	1
					306.0	1.0	1
					307.0	4.0	1
					310.0	3.0	1
					325.0	4.0	1
		73	0	True	302.0	4.0	1
				False	425.0	4.0	1
					421.0	2.0	1
					391.0	4.0	1
					132.0	3.0	1
					139.0	2.0	1
					144.0	4.0	1
					145.0	4.0	1
					175.0	3.0	1
					225.0	4.0	1
					231.0	4.0	1

			252.0	4.0	1
			302.0	2.0	1
			319.0	2.0	1
			324.0	4.0	1
			331.0	4.0	1
			343.0	2.0	1
			346.0	2.0	1
			352.0	2.0	1
				4.0	1
			353.0	2.0	1
74	0	False	334.0	4.0	1
			339.0	4.0	1
			340.0	3.0	1
75	0	False	261.0	2.0	1
			321.0	3.0	1
			324.0	3.0	1
			334.0	2.0	1
			367.0	4.0	1
			390.0	2.0	1
		True	324.0	4.0	1
			338.0	4.0	1
			362.0	4.0	1
	1	False	120.0	4.0	1
			309.0	4.0	1
			342.0	4.0	1
			355.0	2.0	1
		True	120.0	3.0	1
76	0	False	120.0	3.0	1
			128.0	3.0	1
			156.0	4.0	1
			219.0	4.0	1
75	0	False	289.0	2.0	1
			223.0	2.0	1
74	0	False	349.0	4.0	1
75	0	False	216.0	3.0	1
74	0	False	356.0	1.0	1
			367.0	4.0	1
			386.0	2.0	1
			431.0	4.0	1
		True	120.0	3.0	1
			292.0	3.0	1
	1	False	156.0	4.0	1
			260.0	4.0	1
			300.0	1.0	1
			382.0	4.0	1
		True	322.0	4.0	1
75	0	False	120.0	4.0	1
			155.0	3.0	1
			181.0	3.0	1
			185.0	4.0	1
			190.0	3.0	1
			192.0	4.0	1
72	1	False	285.0	4.0	1
			239.0	4.0	1
			220.0	4.0	1
70	0	False	207.0	4.0	1
			247.0	2.0	1
			319.0	2.0	1
			321.0	2.0	1
			329.0	4.0	1
			340.0	3.0	1
			341.0	2.0	1
			345.0	4.0	1
			351.0	2.0	1
			405.0	3.0	1
		True	161.0	4.0	1

			200.0	4.0	1
			203.0	4.0	1
			222.0	4.0	1
			309.0	4.0	1
	1	False	176.0	4.0	1
			185.0	4.0	1
			216.0	4.0	1
	0	False	225.0	3.0	1
			192.0	4.0	1
	1	False	317.0	1.0	1
	0	False	190.0	4.0	1
69	0	False	373.0	2.0	1
			385.0	4.0	1
			398.0	4.0	1
			404.0	3.0	1
		True	158.0	4.0	1
			323.0	4.0	1
			324.0	4.0	1
	1	False	168.0	3.0	1
			297.0	4.0	1
			586.0	3.0	1
		True	301.0	3.0	1
70	0	False	120.0	2.0	1
				3.0	1
			149.0	3.0	1
			159.0	4.0	1
			185.0	2.0	1
			189.0	2.0	1
	1	False	239.0	4.0	1
			331.0	3.0	1
72	1	False	201.0	4.0	1
71	0	True	364.0	4.0	1
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			258.0	2.0	1
			356.0	3.0	1
			420.0	3.0	1
72	0	False	121.0	1.0	1
			183.0	4.0	1
			254.0	4.0	1
			289.0	2.0	1
			302.0	4.0	1
			309.0	4.0	1
			336.0	4.0	1
			337.0	4.0	1
			345.0	2.0	1
			477.0	4.0	1
		True	318.0	2.0	1
			511.0	3.0	1
	1	False	145.0	2.0	1
71	0	True	574.0	4.0	1
			185.0	3.0	1
70	1	False	372.0	4.0	1
71	0	False	1367.0	1.0	1
70	1	False	396.0	4.0	1
71	0	False	120.0	2.0	1
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			230.0	1.0	1
			276.0	4.0	1
			299.0	2.0	1
			301.0	2.0	1
			316.0	4.0	1
			351.0	4.0	1
			358.0	2.0	1
			363.0	4.0	1
			365.0	3.0	1

			376.0	2.0	1
			407.0	4.0	1
			435.0	4.0	1
			650.0	4.0	1
76	0	False	226.0	3.0	1
			263.0	2.0	1
55	0	False	267.0	4.0	1
78	0	False	345.0	2.0	1
			333.0	3.0	1
			336.0	2.0	1
			337.0	4.0	1
			339.0	2.0	1
			340.0	2.0	1
			341.0	3.0	1
			342.0	4.0	1
			343.0	4.0	1
			345.0	4.0	1
76	0	False	286.0	4.0	1
78	0	False	353.0	4.0	1
			354.0	3.0	1
			361.0	4.0	1
			366.0	4.0	1
			376.0	3.0	1
			383.0	3.0	1
			384.0	1.0	1
			387.0	4.0	1
			328.0	4.0	1
				2.0	1
			327.0	2.0	1
			324.0	4.0	1
			252.0	3.0	1
			256.0	4.0	1
			274.0	2.0	1
			277.0	2.0	1
			280.0	4.0	1
			290.0	4.0	1
			297.0	4.0	1
			307.0	3.0	1
			311.0	4.0	1
			312.0	4.0	1
			313.0	3.0	1
			316.0	2.0	1
			318.0	4.0	1
			321.0	2.0	1
				4.0	1
			323.0	2.0	1
				3.0	1
			393.0	3.0	1
			410.0	3.0	1
			423.0	3.0	1
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			212.0	2.0	1
			229.0	4.0	1
			263.0	4.0	1
			289.0	4.0	1
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			300.0	2.0	1
			322.0	3.0	1
			333.0	4.0	1
			338.0	4.0	1
			353.0	2.0	1
			358.0	4.0	1
			361.0	3.0	1
			366.0	2.0	1
			370.0	4.0	1

			406.0	3.0	1
			714.0	4.0	1
			194.0	4.0	1
			176.0	4.0	1
	0	False	444.0	4.0	1
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	0	False	455.0	4.0	1
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			558.0	4.0	1
		True	120.0	3.0	1
			170.0	2.0	1
			175.0	4.0	1
			182.0	2.0	1
			290.0	4.0	1
			297.0	4.0	1
			302.0	4.0	1
			321.0	3.0	1
			378.0	4.0	1
			427.0	4.0	1
			459.0	3.0	1
	1	False	120.0	1.0	1
				2.0	1
				4.0	1
	0	False	251.0	3.0	1
			238.0	3.0	1
			234.0	4.0	1
76	0	True	462.0	2.0	1
77	0	False	120.0	2.0	1
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			159.0	3.0	1
			292.0	4.0	1
			294.0	2.0	1
			295.0	4.0	1
			300.0	4.0	1
			302.0	3.0	1
			308.0	3.0	1
			317.0	4.0	1
			324.0	2.0	1
			329.0	3.0	1
			360.0	2.0	1
			396.0	2.0	1
			414.0	4.0	1
		True	120.0	2.0	1
			322.0	3.0	1
		False	120.0	1.0	1
76	0	True	313.0	2.0	1
77	1	False	254.0	4.0	1
76	0	True	206.0	4.0	1
		False	296.0	4.0	1
			304.0	4.0	1
			305.0	3.0	1
			311.0	3.0	1
			317.0	3.0	1
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			323.0	4.0	1
			325.0	4.0	1
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			349.0	4.0	1
			354.0	3.0	1
			357.0	2.0	1
			365.0	2.0	1
			428.0	3.0	1
			444.0	4.0	1
			623.0	4.0	1
77	0	True	338.0	4.0	1

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78	0	False	230.0	4.0	1
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			186.0	3.0	1
			191.0	4.0	1
			192.0	2.0	1
			193.0	4.0	1
			194.0	4.0	1
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			210.0	4.0	1
			212.0	4.0	1
			215.0	2.0	1
			217.0	4.0	1
			218.0	3.0	1
			220.0	4.0	1
			223.0	1.0	1
			228.0	4.0	1
			179.0	2.0	1
			174.0	2.0	1
77	1	False	352.0	3.0	1
78	0	False	172.0	4.0	1
77	1	False	395.0	4.0	1
78	0	False	126.0	4.0	1
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				2.0	1
			132.0	3.0	1
			133.0	4.0	1
			137.0	3.0	1
			141.0	1.0	1
			142.0	2.0	1
			146.0	4.0	1
			149.0	4.0	1
			158.0	1.0	1
				4.0	1
			164.0	3.0	1
			166.0	4.0	1
			169.0	4.0	1
			170.0	4.0	1
69	0	False	341.0	4.0	1
			326.0	3.0	1
			315.0	2.0	1
59	1	False	284.0	4.0	1
	0	False	360.0	4.0	1
			374.0	4.0	1
			405.0	4.0	1
			500.0	4.0	1
			558.0	4.0	1
		True	308.0	4.0	1
			384.0	1.0	1
	1	False	120.0	4.0	1
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69	0	False	308.0	2.0	1
59	1	False	334.0	4.0	1
			342.0	3.0	1
			343.0	4.0	1
		True	254.0	2.0	1
60	0	False	120.0	2.0	1
			125.0	4.0	1
			147.0	4.0	1
			163.0	3.0	1
59	0	False	358.0	2.0	1
			344.0	3.0	1
			334.0	3.0	1

			330.0	1.0	1
58	0	False	370.0	2.0	1
			379.0	3.0	1
			518.0	4.0	1
		True	138.0	4.0	1
			147.0	1.0	1
			261.0	4.0	1
			301.0	4.0	1
	1	False	120.0	4.0	1
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59	0	False	120.0	2.0	1
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			136.0	4.0	1
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			234.0	4.0	1
			236.0	4.0	1
			311.0	3.0	1
60	0	False	294.0	4.0	1
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			316.0	4.0	1
61	0	False	373.0	2.0	1
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			396.0	4.0	1
		True	209.0	4.0	1
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			347.0	1.0	1
			448.0	4.0	1
	1	False	212.0	4.0	1
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			311.0	4.0	1
			376.0	4.0	1
			1256.0	4.0	1
62	0	False	120.0	3.0	1
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61	0	False	374.0	4.0	1
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60	0	False	330.0	3.0	1
61	0	False	324.0	4.0	1
60	0	False	343.0	2.0	1
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			363.0	3.0	1
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		True	120.0	2.0	1
			302.0	4.0	1
	1	False	147.0	4.0	1
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61	0	False	146.0	2.0	1
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			268.0	4.0	1
			271.0	4.0	1
			292.0	3.0	1
			298.0	4.0	1
			302.0	3.0	1
			305.0	4.0	1
58	0	False	363.0	4.0	1
			348.0	2.0	1
			334.0	4.0	1
55	1	False	295.0	3.0	1
			360.0	2.0	1
56	0	False	120.0	3.0	1

				156.0	2.0	1
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				230.0	4.0	1
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				265.0	4.0	1
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				309.0	4.0	1
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				323.0	4.0	1
				327.0	2.0	1
				334.0	4.0	1
	55	1	False	346.0	2.0	1
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	56	0	False	344.0	4.0	1
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			False	274.0	3.0	1
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				286.0	4.0	1
				300.0	4.0	1
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				346.0	4.0	1
				356.0	4.0	1
				361.0	4.0	1
				364.0	2.0	1
				379.0	1.0	1
C	78	0	False	401.0	4.0	1
D	55	0	True	181.0	2.0	1
				191.0	4.0	1
				344.0	4.0	1
				354.0	4.0	1
	56	0	False	338.0	4.0	1
				345.0	4.0	1
	58	0	False	317.0	4.0	1
	57	0	False	252.0	3.0	1
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				355.0	4.0	1
				377.0	4.0	1
				416.0	4.0	1
			True	315.0	3.0	1
		1	False	124.0	4.0	1
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	58	0	False	120.0	2.0	1
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				146.0	3.0	1
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				305.0	4.0	1
	57	0	False	306.0	4.0	1
				233.0	2.0	1
	56	0	False	347.0	4.0	1
	57	0	False	195.0	4.0	1
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				397.0	4.0	1
				537.0	4.0	1
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			315.0	3.0	1
			395.0	4.0	1
	1	False	309.0	4.0	1
57	0	False	120.0	1.0	1
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			141.0	4.0	1
			153.0	3.0	1
			158.0	3.0	1
			174.0	4.0	1
			186.0	2.0	1
62	0	False	172.0	4.0	1
			197.0	2.0	1
			202.0	3.0	1
67	0	False	127.0	4.0	1
			201.0	3.0	1
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			272.0	4.0	1
			279.0	3.0	1
			280.0	3.0	1
			289.0	4.0	1
			294.0	3.0	1
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			127.0	3.0	1
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65	0	True	415.0	4.0	1
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			416.0	3.0	1
66	0	False	120.0	2.0	1
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			159.0	1.0	1
			224.0	1.0	1
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			267.0	4.0	1
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67	0	False	120.0	4.0	1
			468.0	4.0	1
		True	1235.0	2.0	1
65	0	True	175.0	4.0	1
68	0	False	357.0	3.0	1
			413.0	3.0	1
			456.0	2.0	1
			658.0	4.0	1
		True	302.0	4.0	1
	1	False	199.0	4.0	1
			265.0	3.0	1
			317.0	3.0	1
			324.0	4.0	1

			335.0	4.0	1
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			244.0	1.0	1
			252.0	2.0	1
			287.0	2.0	1
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			307.0	2.0	1
68	0	False	368.0	3.0	1
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67	1	False	247.0	4.0	1
68	0	False	352.0	4.0	1
67	1	False	416.0	2.0	1
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			140.0	4.0	1
			141.0	4.0	1
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			324.0	3.0	1
			332.0	4.0	1
			340.0	2.0	1
			344.0	2.0	1
			348.0	2.0	1
			351.0	3.0	1
65	0	True	271.0	4.0	1
		False	493.0	4.0	1
62	0	False	230.0	4.0	1
	1	True	170.0	2.0	1
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			163.0	2.0	1
			181.0	3.0	1
			186.0	4.0	1
			221.0	4.0	1
			257.0	4.0	1
			304.0	4.0	1
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			339.0	4.0	1
			343.0	4.0	1
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				3.0	1
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			359.0	4.0	1
			370.0	4.0	1
			392.0	4.0	1
62	1	True	246.0	4.0	1
		False	331.0	4.0	1
63	0	False	426.0	2.0	1
62	0	True	191.0	4.0	1
		False	242.0	4.0	1
			255.0	3.0	1
			300.0	4.0	1
			304.0	3.0	1
			317.0	2.0	1
			320.0	2.0	1
			325.0	3.0	1
			328.0	1.0	1
			339.0	3.0	1
			340.0	3.0	1
			341.0	4.0	1

				345.0	2.0	1
				347.0	4.0	1
				373.0	3.0	1
				380.0	3.0	1
				432.0	2.0	1
				710.0	4.0	1
	63	0	False	407.0	4.0	1
				448.0	4.0	1
	65	0	False	447.0	4.0	1
	64	0	False	371.0	4.0	1
				391.0	4.0	1
				958.0	1.0	1
			True	195.0	4.0	1
		1	False	316.0	2.0	1
			True	355.0	2.0	1
	65	0	False	120.0	2.0	1
					4.0	1
				193.0	2.0	1
				198.0	3.0	1
				218.0	3.0	1
				240.0	2.0	1
				296.0	4.0	1
				343.0	2.0	1
				344.0	4.0	1
				347.0	4.0	1
				396.0	3.0	1
				397.0	1.0	1
	64	0	False	383.0	2.0	1
				361.0	4.0	1
	63	0	False	497.0	2.0	1
	64	0	False	357.0	3.0	1
	63	0	False	524.0	2.0	1
			True	304.0	3.0	1
		1	False	212.0	4.0	1
	64	0	False	120.0	2.0	1
					3.0	1
				127.0	1.0	1
				143.0	4.0	1
				151.0	4.0	1
				159.0	2.0	1
				171.0	4.0	1
				181.0	2.0	1
					4.0	1
				231.0	3.0	1
				275.0	3.0	1
				312.0	3.0	1
				345.0	2.0	1
				353.0	2.0	1
C	78	0	False	409.0	2.0	1
				357.0	2.0	1
				400.0	2.0	1
	53	1	False	257.0	2.0	1
	54	0	False	120.0	2.0	1
				138.0	4.0	1
				170.0	3.0	1
				200.0	4.0	1
				205.0	3.0	1
				233.0	1.0	1
				245.0	2.0	1
				252.0	4.0	1
				261.0	3.0	1
				262.0	4.0	1
				266.0	2.0	1
				276.0	4.0	1
				290.0	3.0	1
					4.0	1

			291.0	4.0	1
			298.0	3.0	1
			303.0	4.0	1
53	1	False	361.0	4.0	1
	0	True	339.0	2.0	1
54	0	False	311.0	4.0	1
53	0	True	324.0	4.0	1
		False	183.0	3.0	1
			190.0	4.0	1
			223.0	4.0	1
			237.0	4.0	1
			253.0	3.0	1
			285.0	4.0	1
			301.0	3.0	1
			303.0	4.0	1
			312.0	2.0	1
			346.0	4.0	1
			347.0	3.0	1
			351.0	4.0	1
			354.0	4.0	1
			417.0	2.0	1
			434.0	4.0	1
			638.0	4.0	1
			713.0	4.0	1
54	0	False	308.0	1.0	1
			315.0	4.0	1
55	0	False	367.0	4.0	1
			154.0	4.0	1
			179.0	4.0	1
			202.0	4.0	1
			237.0	4.0	1
			258.0	2.0	1
			263.0	3.0	1
			271.0	4.0	1
			298.0	3.0	1
			302.0	3.0	1
			322.0	3.0	1
			324.0	3.0	1
			327.0	4.0	1
			331.0	4.0	1
			335.0	2.0	1
			345.0	4.0	1
			354.0	3.0	1
			357.0	4.0	1
			361.0	4.0	1
			178.0	4.0	1
			126.0	4.0	1
54	0	False	319.0	4.0	1
	1	True	283.0	4.0	1
	0	False	328.0	4.0	1
			332.0	1.0	1
			343.0	2.0	1
			349.0	2.0	1
			351.0	3.0	1
			352.0	4.0	1
			359.0	4.0	1
			367.0	2.0	1
			383.0	4.0	1
			390.0	4.0	1
			412.0	4.0	1
			433.0	4.0	1
			676.0	4.0	1
			1508.0	4.0	1
		True	120.0	2.0	1
	1	False	120.0	3.0	1
			328.0	4.0	1

53	0	False	173.0	4.0	1
			142.0	2.0	1
			135.0	4.0	1
50	0	False	537.0	4.0	1
		True	170.0	4.0	1
			288.0	4.0	1
			346.0	4.0	1
			375.0	4.0	1
	1	False	338.0	4.0	1
			546.0	3.0	1
51	0	False	120.0	3.0	1
			129.0	2.0	1
			196.0	4.0	1
			198.0	4.0	1
			251.0	4.0	1
			264.0	4.0	1
			291.0	4.0	1
			293.0	3.0	1
			297.0	4.0	1
			302.0	4.0	1
			309.0	3.0	1
50	0	True	130.0	3.0	1
		False	426.0	4.0	1
53	0	False	120.0	3.0	1
50	0	False	419.0	4.0	1
			236.0	4.0	1
			243.0	4.0	1
			253.0	2.0	1
			267.0	3.0	1
			279.0	3.0	1
			290.0	4.0	1
			306.0	2.0	1
			309.0	4.0	1
			321.0	3.0	1
			322.0	2.0	1
			336.0	4.0	1
			341.0	4.0	1
			351.0	2.0	1
			360.0	3.0	1
			364.0	3.0	1
			399.0	3.0	1
			400.0	3.0	1
51	0	False	328.0	4.0	1
			346.0	2.0	1
			355.0	4.0	1
			363.0	4.0	1
52	0	False	323.0	4.0	1
			340.0	3.0	1
			364.0	2.0	1
			375.0	3.0	1
			535.0	3.0	1
		True	326.0	4.0	1
			327.0	4.0	1
			405.0	4.0	1
	1	False	151.0	2.0	1
			181.0	2.0	1
			200.0	3.0	1
			251.0	4.0	1
			308.0	2.0	1
			336.0	4.0	1
			341.0	4.0	1
			401.0	4.0	1
			438.0	2.0	1
	0	False	308.0	4.0	1
			290.0	2.0	1
			283.0	3.0	1

			126.0	3.0	1
51	0	False	378.0	4.0	1
			386.0	4.0	1
			414.0	1.0	1
			463.0	2.0	1
		True	304.0	4.0	1
			383.0	4.0	1
52	0	False	120.0	4.0	1
			136.0	4.0	1
			252.0	2.0	1
			163.0	2.0	1
			199.0	4.0	1
			200.0	4.0	1
			206.0	2.0	1
			236.0	4.0	1
			244.0	2.0	1
			250.0	4.0	1
55	0	False	365.0	4.0	1
			386.0	3.0	1
60	0	False	296.0	4.0	1
58	0	False	315.0	2.0	1
			325.0	2.0	1
			334.0	2.0	1
			335.0	2.0	1
			342.0	4.0	1
			355.0	1.0	1
			371.0	4.0	1
			372.0	4.0	1
			373.0	4.0	1
			375.0	4.0	1
			604.0	3.0	1
		True	120.0	2.0	1
			293.0	4.0	1
			363.0	2.0	1
			366.0	4.0	1
	1	False	306.0	2.0	1
			332.0	4.0	1
			363.0	2.0	1
	0	False	320.0	4.0	1
			307.0	4.0	1
59	0	False	137.0	4.0	1
58	0	False	297.0	4.0	1
57	1	False	452.0	4.0	1
		True	120.0	2.0	1
			378.0	4.0	1
58	0	False	120.0	3.0	1
				4.0	1
			123.0	4.0	1
			137.0	4.0	1
			183.0	4.0	1
			186.0	2.0	1
			190.0	2.0	1
			193.0	2.0	1
			208.0	3.0	1
			255.0	4.0	1
			260.0	2.0	1
			280.0	2.0	1
			286.0	4.0	1
			295.0	3.0	1
	1	False	604.0	4.0	1
59	0	False	169.0	4.0	1
55	0	False	389.0	3.0	1
59	0	True	242.0	1.0	1
			294.0	4.0	1
			335.0	2.0	1
			340.0	3.0	1

			370.0	3.0	1
			411.0	4.0	1
	1	False	352.0	2.0	1
			371.0	4.0	1
		True	257.0	2.0	1
			436.0	4.0	1
60	0	False	120.0	4.0	1
			125.0	4.0	1
			128.0	4.0	1
			145.0	2.0	1
			147.0	4.0	1
			163.0	3.0	1
			176.0	4.0	1
			234.0	4.0	1
59	0	True	273.0	4.0	1
			134.0	1.0	1
		False	217.0	3.0	1
			550.0	4.0	1
			218.0	4.0	1
			234.0	4.0	1
			290.0	3.0	1
			292.0	4.0	1
			299.0	3.0	1
			305.0	4.0	1
			313.0	4.0	1
			314.0	3.0	1
			317.0	4.0	1
			319.0	2.0	1
			339.0	4.0	1
			348.0	4.0	1
			376.0	3.0	1
			387.0	3.0	1
			389.0	4.0	1
			412.0	3.0	1
			442.0	3.0	1
57	1	False	400.0	3.0	1
			330.0	4.0	1
			328.0	4.0	1
56	0	False	223.0	3.0	1
			239.0	2.0	1
			241.0	4.0	1
			248.0	1.0	1
				3.0	1
			250.0	4.0	1
			263.0	2.0	1
			275.0	4.0	1
			282.0	2.0	1
			295.0	4.0	1
			296.0	4.0	1
			315.0	4.0	1
			318.0	3.0	1
			328.0	4.0	1
			331.0	4.0	1
			333.0	4.0	1
			341.0	3.0	1
			350.0	4.0	1
			232.0	3.0	1
			219.0	1.0	1
57	1	False	164.0	4.0	1
56	0	False	216.0	4.0	1
55	0	False	460.0	2.0	1
			476.0	3.0	1
			658.0	4.0	1
			724.0	4.0	1
		True	176.0	1.0	1
	1	False	152.0	4.0	1

			212.0	4.0	1
			341.0	4.0	1
		True	392.0	4.0	1
56	0	False	121.0	4.0	1
			125.0	4.0	1
			133.0	4.0	1
			148.0	1.0	1
			156.0	4.0	1
			172.0	2.0	1
			198.0	2.0	1
			215.0	4.0	1
			359.0	4.0	1
			360.0	4.0	1
			372.0	1.0	1
			382.0	2.0	1
57	0	False	250.0	3.0	1
			276.0	3.0	1
			280.0	4.0	1
			281.0	4.0	1
			289.0	2.0	1
			294.0	2.0	1
			298.0	4.0	1
			299.0	2.0	1
			318.0	4.0	1
			321.0	3.0	1
			322.0	2.0	1
			339.0	4.0	1
			353.0	4.0	1
			358.0	4.0	1
			390.0	4.0	1
			398.0	4.0	1
		True	131.0	3.0	1
		False	235.0	4.0	1
			227.0	2.0	1
			226.0	4.0	1
56	1	False	301.0	4.0	1
	0	False	391.0	4.0	1
			398.0	4.0	1
		True	151.0	4.0	1
			162.0	3.0	1
			320.0	4.0	1
			323.0	4.0	1
	1	False	184.0	4.0	1
			315.0	4.0	1
57	0	False	217.0	3.0	1
56	1	False	369.0	4.0	1
			540.0	4.0	1
57	0	False	160.0	3.0	1
			161.0	4.0	1
			170.0	4.0	1
			194.0	4.0	1
			213.0	4.0	1
50	0	False	234.0	2.0	1
			219.0	2.0	1
			183.0	4.0	1
40	0	False	350.0	4.0	1
			392.0	3.0	1
			448.0	3.0	1
		True	120.0	3.0	1
	1	False	308.0	2.0	1
			319.0	2.0	1
			478.0	4.0	1
41	0	False	120.0	3.0	1
			223.0	4.0	1
			235.0	4.0	1
			241.0	4.0	1

			296.0	3.0	1
			329.0	4.0	1
			347.0	2.0	1
			348.0	2.0	1
			363.0	4.0	1
			364.0	3.0	1
			371.0	2.0	1
40	0	False	358.0	4.0	1
			350.0	3.0	1
41	0	False	386.0	4.0	1
40	0	False	302.0	2.0	1
38	0	True	277.0	2.0	1
			353.0	3.0	1
39	0	False	120.0	4.0	1
			196.0	4.0	1
			208.0	4.0	1
			212.0	3.0	1
			291.0	3.0	1
			312.0	4.0	1
			324.0	2.0	1
			343.0	4.0	1
	1	False	305.0	4.0	1
			381.0	3.0	1
40	0	False	129.0	4.0	1
			188.0	1.0	1
			204.0	3.0	1
			256.0	1.0	1
			299.0	4.0	1
41	0	False	376.0	4.0	1
			1480.0	2.0	1
50	0	False	139.0	4.0	1
42	0	True	302.0	4.0	1
43	0	False	220.0	4.0	1
			277.0	2.0	1
			292.0	4.0	1
			340.0	3.0	1
			347.0	4.0	1
			350.0	4.0	1
			356.0	4.0	1
			368.0	2.0	1
			384.0	1.0	1
			393.0	4.0	1
			396.0	4.0	1
			426.0	3.0	1
		True	375.0	3.0	1
			570.0	4.0	1
	1	False	216.0	1.0	1
			321.0	4.0	1
			497.0	2.0	1
42	1	False	373.0	3.0	1
	0	False	578.0	2.0	1
41	0	True	120.0	3.0	1
42	0	False	574.0	1.0	1
41	0	True	240.0	4.0	1
	1	False	313.0	4.0	1
42	0	False	120.0	4.0	1
			208.0	3.0	1
			215.0	3.0	1
			260.0	1.0	1
			263.0	2.0	1
			270.0	2.0	1
			303.0	3.0	1
			306.0	4.0	1
			322.0	3.0	1
			324.0	2.0	1
			378.0	1.0	1

			413.0	4.0	1
			478.0	3.0	1
			502.0	2.0	1
			514.0	4.0	1
38	0	False	572.0	4.0	1
			342.0	4.0	1
				3.0	1
31	1	False	291.0	2.0	1
32	0	False	236.0	3.0	1
			320.0	3.0	1
			338.0	4.0	1
			356.0	4.0	1
			427.0	4.0	1
	1	False	169.0	4.0	1
33	0	False	163.0	2.0	1
			197.0	2.0	1
			304.0	4.0	1
			324.0	3.0	1
			337.0	2.0	1
			576.0	2.0	1
			1336.0	3.0	1
34	0	False	292.0	4.0	1
			302.0	4.0	1
			578.0	2.0	1
		True	324.0	4.0	1
32	0	False	174.0	3.0	1
31	0	True	302.0	2.0	1
38	0	False	319.0	4.0	1
31	0	False	336.0	3.0	1
26	0	False	353.0	4.0	1
			448.0	3.0	1
27	0	False	433.0	1.0	1
	1	False	364.0	4.0	1
28	0	False	239.0	1.0	1
			554.0	4.0	1
		True	326.0	4.0	1
29	0	False	255.0	2.0	1
			347.0	4.0	1
			385.0	2.0	1
	1	False	170.0	3.0	1
30	0	False	135.0	2.0	1
			158.0	4.0	1
			236.0	2.0	1
			273.0	2.0	1
			342.0	4.0	1
31	0	False	328.0	4.0	1
35	0	False	120.0	2.0	1
			180.0	4.0	1
			193.0	3.0	1
			199.0	4.0	1
37	0	False	335.0	2.0	1
			356.0	4.0	1
			365.0	2.0	1
			376.0	3.0	1
			399.0	4.0	1
		True	313.0	2.0	1
	1	False	304.0	3.0	1
			309.0	4.0	1
38	0	False	132.0	1.0	1
			210.0	4.0	1
			226.0	1.0	1
			247.0	2.0	1
			253.0	3.0	1
			274.0	2.0	1
			286.0	2.0	1
			309.0	3.0	1

			310.0	3.0	1
37	0	False	322.0	1.0	1
			300.0	4.0	1
			249.0	4.0	1
36	0	False	215.0	3.0	1
35	0	False	219.0	3.0	1
			286.0	2.0	1
			295.0	2.0	1
			317.0	3.0	1
36	0	False	120.0	3.0	1
				4.0	1
			147.0	2.0	1
			263.0	4.0	1
37	0	False	149.0	2.0	1
36	0	False	285.0	4.0	1
			353.0	2.0	1
			355.0	3.0	1
			382.0	4.0	1
			385.0	4.0	1
	1	False	318.0	4.0	1
37	0	False	142.0	4.0	1
43	1	True	396.0	3.0	1
44	0	False	120.0	3.0	1
			133.0	4.0	1
48	0	False	256.0	3.0	1
			286.0	2.0	1
			289.0	2.0	1
			291.0	3.0	1
			306.0	3.0	1
			310.0	4.0	1
			312.0	4.0	1
			322.0	2.0	1
			329.0	4.0	1
			351.0	3.0	1
				4.0	1
			361.0	2.0	1
			369.0	4.0	1
			390.0	3.0	1
			409.0	2.0	1
			439.0	4.0	1
		True	120.0	1.0	1
			255.0	4.0	1
		False	258.0	4.0	1
			242.0	4.0	1
47	0	False	331.0	3.0	1
48	0	False	210.0	3.0	1
47	0	False	346.0	2.0	1
			349.0	2.0	1
			352.0	3.0	1
			353.0	2.0	1
				4.0	1
			359.0	2.0	1
			388.0	1.0	1
			613.0	3.0	1
			614.0	4.0	1
		True	338.0	1.0	1
			388.0	2.0	1
			389.0	4.0	1
	1	False	120.0	2.0	1
			258.0	4.0	1
			370.0	4.0	1
		True	323.0	2.0	1
48	0	False	173.0	2.0	1
	1	False	344.0	2.0	1
			460.0	2.0	1
			507.0	4.0	1

		True	120.0	2.0	1
49	0	False	338.0	3.0	1
			345.0	4.0	1
			347.0	4.0	1
			348.0	4.0	1
			358.0	4.0	1
			413.0	4.0	1
			423.0	2.0	1
			490.0	3.0	1
			531.0	1.0	1
		True	205.0	1.0	1
			235.0	4.0	1
	1	False	122.0	4.0	1
			259.0	3.0	1
			295.0	1.0	1
			346.0	2.0	1
50	0	False	120.0	3.0	1
			125.0	2.0	1
49	0	False	336.0	4.0	1
			316.0	4.0	1
			312.0	4.0	1
			189.0	4.0	1
			120.0	2.0	1
				4.0	1
			122.0	1.0	1
			137.0	4.0	1
			147.0	4.0	1
			153.0	2.0	1
			174.0	4.0	1
			205.0	3.0	1
			308.0	2.0	1
			213.0	4.0	1
			217.0	1.0	1
			222.0	3.0	1
			235.0	3.0	1
			238.0	3.0	1
			268.0	4.0	1
			298.0	2.0	1
47	0	False	337.0	4.0	1
			328.0	3.0	1
44	0	False	134.0	4.0	1
			400.0	3.0	1
		True	166.0	4.0	1
			194.0	2.0	1
			381.0	2.0	1
	1	False	127.0	3.0	1
			242.0	1.0	1
			358.0	4.0	1
			362.0	4.0	1
			526.0	4.0	1
			722.0	4.0	1
45	0	False	204.0	4.0	1
			263.0	4.0	1
			273.0	3.0	1
			281.0	3.0	1
			298.0	2.0	1
			303.0	2.0	1
			311.0	2.0	1
			334.0	4.0	1
44	0	False	560.0	4.0	1
			384.0	2.0	1
47	0	False	323.0	4.0	1
44	0	False	379.0	4.0	1
			148.0	3.0	1
			192.0	3.0	1
			248.0	2.0	1

				4.0	1
			258.0	1.0	1
			266.0	2.0	1
			268.0	2.0	1
			293.0	2.0	1
			301.0	4.0	1
			306.0	3.0	1
			307.0	4.0	1
			316.0	2.0	1
			321.0	4.0	1
			324.0	3.0	1
			330.0	4.0	1
			339.0	1.0	1
			372.0	4.0	1
45	0	False	345.0	3.0	1
			352.0	2.0	1
			374.0	2.0	1
			393.0	4.0	1
46	0	False	328.0	4.0	1
			331.0	4.0	1
			358.0	4.0	1
			372.0	4.0	1
		True	289.0	2.0	1
			743.0	3.0	1
	1	False	345.0	4.0	1
47	0	False	120.0	2.0	1
				4.0	1
			124.0	4.0	1
			172.0	4.0	1
			209.0	4.0	1
			232.0	3.0	1
			257.0	2.0	1
			306.0	4.0	1
			316.0	3.0	1
			323.0	1.0	1
46	0	False	325.0	3.0	1
			315.0	3.0	1
			308.0	1.0	1
			120.0	4.0	1
45	0	False	397.0	2.0	1
			400.0	2.0	1
			404.0	4.0	1
		True	343.0	3.0	1
	1	False	297.0	4.0	1
			343.0	2.0	1
46	0	False	120.0	1.0	1
			159.0	2.0	1
			307.0	4.0	1
			185.0	4.0	1
			211.0	4.0	1
			227.0	3.0	1
			253.0	1.0	1
			279.0	4.0	1
			292.0	4.0	1
			304.0	4.0	1
60	0	False	277.0	3.0	1
			302.0	4.0	1
78	0	False	396.0	4.0	1
74	0	False	336.0	4.0	1
			366.0	3.0	1
			370.0	2.0	1
				4.0	1
			371.0	2.0	1
			378.0	4.0	1
			409.0	3.0	1
		True	164.0	2.0	1

			199.0	4.0	1
			264.0	4.0	1
			341.0	2.0	1
			347.0	3.0	1
	1	False	128.0	3.0	1
			153.0	4.0	1
			232.0	4.0	1
			308.0	4.0	1
75	0	False	157.0	4.0	1
			200.0	3.0	1
74	0	False	350.0	2.0	1
			335.0	4.0	1
75	0	False	237.0	2.0	1
74	0	False	335.0	3.0	1
73	1	False	120.0	4.0	1
			201.0	4.0	1
			224.0	4.0	1
			348.0	4.0	1
			356.0	4.0	1
			374.0	4.0	1
		True	441.0	2.0	1
74	0	False	133.0	1.0	1
			167.0	4.0	1
			249.0	2.0	1
			262.0	4.0	1
			283.0	3.0	1
			292.0	4.0	1
			295.0	2.0	1
			319.0	3.0	1
			331.0	4.0	1
			332.0	3.0	1
75	0	False	223.0	3.0	1
			240.0	3.0	1
76	0	False	295.0	4.0	1
75	0	False	474.0	3.0	1
			905.0	3.0	1
		True	341.0	1.0	1
	1	False	126.0	2.0	1
			133.0	2.0	1
			178.0	4.0	1
			306.0	4.0	1
			307.0	3.0	1
			353.0	4.0	1
		True	363.0	4.0	1
76	0	False	120.0	1.0	1
			138.0	4.0	1
			167.0	2.0	1
			178.0	4.0	1
			211.0	3.0	1
			216.0	3.0	1
			230.0	2.0	1
			281.0	2.0	1
75	0	False	651.0	4.0	1
			379.0	4.0	1
			252.0	4.0	1
			373.0	3.0	1
			255.0	4.0	1
			273.0	4.0	1
			278.0	2.0	1
			282.0	4.0	1
			288.0	2.0	1
			308.0	3.0	1
			313.0	1.0	1
			316.0	4.0	1
			322.0	3.0	1
			324.0	4.0	1

			327.0	1.0	1
			329.0	1.0	1
			344.0	3.0	1
				4.0	1
			348.0	2.0	1
			350.0	4.0	1
			357.0	3.0	1
73	0	True	441.0	3.0	1
			377.0	4.0	1
			365.0	4.0	1
71	0	False	373.0	4.0	1
			395.0	1.0	1
			640.0	4.0	1
		True	183.0	2.0	1
			353.0	4.0	1
			398.0	4.0	1
	1	False	235.0	4.0	1
			276.0	3.0	1
			312.0	4.0	1
			343.0	4.0	1
			357.0	4.0	1
			383.0	1.0	1
72	0	False	154.0	2.0	1
			185.0	4.0	1
			200.0	4.0	1
			286.0	3.0	1
			309.0	4.0	1
			324.0	3.0	1
71	0	False	383.0	2.0	1
			363.0	4.0	1
73	0	True	334.0	2.0	1
71	0	False	351.0	4.0	1
			125.0	4.0	1
			150.0	2.0	1
			156.0	4.0	1
			158.0	4.0	1
			262.0	4.0	1
			287.0	2.0	1
			292.0	4.0	1
			294.0	4.0	1
			302.0	2.0	1
			304.0	2.0	1
			311.0	2.0	1
			326.0	4.0	1
			328.0	4.0	1
			331.0	3.0	1
			334.0	3.0	1
			338.0	4.0	1
			340.0	3.0	1
72	0	False	326.0	4.0	1
			332.0	3.0	1
			340.0	4.0	1
			352.0	4.0	1
73	0	False	200.0	2.0	1
			219.0	3.0	1
			227.0	1.0	1
			309.0	4.0	1
			315.0	1.0	1
			324.0	4.0	1
			343.0	4.0	1
			356.0	4.0	1
			364.0	2.0	1
			386.0	4.0	1
			388.0	2.0	1
			389.0	2.0	1
			462.0	4.0	1

			1567.0	3.0	1
		True	180.0	3.0	1
			231.0	4.0	1
			256.0	3.0	1
		False	193.0	4.0	1
			177.0	4.0	1
			145.0	4.0	1
72	0	False	880.0	4.0	1
			355.0	1.0	1
			356.0	4.0	1
			371.0	3.0	1
			386.0	4.0	1
			391.0	4.0	1
			398.0	4.0	1
			584.0	1.0	1
		True	180.0	3.0	1
73	0	False	120.0	4.0	1
72	0	True	267.0	4.0	1
			319.0	2.0	1
			375.0	4.0	1
			394.0	4.0	1
	1	False	143.0	4.0	1
			301.0	4.0	1
			326.0	4.0	1
76	0	False	288.0	2.0	1
			306.0	4.0	1
60	0	False	304.0	4.0	1
78	0	False	294.0	2.0	1
			299.0	2.0	1
			300.0	4.0	1
			302.0	2.0	1
				4.0	1
			303.0	2.0	1
				4.0	1
			304.0	2.0	1
			306.0	3.0	1
				4.0	1
			307.0	2.0	1
			308.0	2.0	1
			309.0	1.0	1
			310.0	1.0	1
				3.0	1
				4.0	1
			311.0	3.0	1
			312.0	4.0	1
			297.0	4.0	1
			294.0	1.0	1
			314.0	3.0	1
			289.0	4.0	1
			230.0	4.0	1
			232.0	1.0	1
			233.0	4.0	1
			240.0	2.0	1
				3.0	1
			242.0	4.0	1
			248.0	1.0	1
			250.0	4.0	1
			262.0	3.0	1
			269.0	3.0	1
			273.0	2.0	1
			274.0	4.0	1
			276.0	4.0	1
			279.0	3.0	1
			281.0	3.0	1
			283.0	4.0	1
			286.0	2.0	1

			313.0	4.0	1
			315.0	4.0	1
76	0	False	308.0	4.0	1
26	0	False	311.0	4.0	1
78	0	False	360.0	4.0	1
			362.0	4.0	1
			364.0	3.0	1
			367.0	4.0	1
			370.0	4.0	1
			372.0	2.0	1
			373.0	4.0	1
			377.0	4.0	1
			378.0	2.0	1
			379.0	4.0	1
			383.0	4.0	1
			384.0	4.0	1
			386.0	2.0	1
			390.0	2.0	1
			395.0	3.0	1
				4.0	1
			396.0	3.0	1
			358.0	4.0	1
			356.0	2.0	1
			318.0	4.0	1
			350.0	2.0	1
			321.0	4.0	1
			322.0	3.0	1
			323.0	4.0	1
			325.0	3.0	1
			326.0	3.0	1
				4.0	1
			327.0	4.0	1
			329.0	2.0	1
			336.0	4.0	1
			337.0	3.0	1
			338.0	2.0	1
			340.0	3.0	1
			345.0	2.0	1
				4.0	1
			346.0	3.0	1
				4.0	1
			347.0	4.0	1
			226.0	3.0	1
			215.0	4.0	1
				2.0	1
76	1	False	310.0	4.0	1
			375.0	4.0	1
		True	370.0	4.0	1
77	0	False	120.0	2.0	1
				4.0	1
			166.0	4.0	1
			198.0	3.0	1
			219.0	3.0	1
			228.0	4.0	1
			238.0	4.0	1
			312.0	2.0	1
			321.0	3.0	1
			333.0	3.0	1
			343.0	4.0	1
			348.0	2.0	1
			443.0	2.0	1
			498.0	4.0	1
		True	235.0	3.0	1
76	1	False	335.0	4.0	1
			232.0	4.0	1
78	0	False	209.0	4.0	1

76	1	False	212.0	4.0	1
	0	False	319.0	2.0	1
			323.0	4.0	1
			327.0	3.0	1
			331.0	3.0	1
			349.0	4.0	1
			350.0	3.0	1
				4.0	1
			351.0	2.0	1
			354.0	4.0	1
			359.0	4.0	1
			372.0	2.0	1
			373.0	4.0	1
			768.0	2.0	1
		True	262.0	4.0	1
			339.0	3.0	1
			366.0	3.0	1
			394.0	3.0	1
77	0	True	404.0	4.0	1
	1	False	291.0	4.0	1
			305.0	4.0	1
			328.0	4.0	1
78	0	False	172.0	3.0	1
			179.0	4.0	1
			181.0	3.0	1
			183.0	2.0	1
			184.0	4.0	1
			188.0	4.0	1
			189.0	1.0	1
				2.0	1
			192.0	4.0	1
			195.0	4.0	1
			197.0	2.0	1
			200.0	2.0	1
			203.0	4.0	1
			205.0	4.0	1
			206.0	2.0	1
				3.0	1
			207.0	2.0	1
			171.0	3.0	1
			170.0	2.0	1
			162.0	2.0	1
			141.0	2.0	1
77	1	False	351.0	4.0	1
		True	342.0	4.0	1
78	0	False	123.0	3.0	1
				4.0	1
			124.0	1.0	1
			131.0	4.0	1
			134.0	4.0	1
			141.0	4.0	1
			160.0	3.0	1
			142.0	3.0	1
				4.0	1
			145.0	4.0	1
			147.0	3.0	1
			148.0	3.0	1
			152.0	2.0	1
			156.0	2.0	1
71	0	False	120.0	4.0	1
70	0	True	366.0	4.0	1
			311.0	3.0	1
63	0	False	320.0	4.0	1
			324.0	2.0	1
			336.0	4.0	1
			341.0	4.0	1

			370.0	2.0	1
			395.0	3.0	1
			403.0	4.0	1
			418.0	4.0	1
			420.0	3.0	1
		True	177.0	3.0	1
			295.0	3.0	1
			384.0	2.0	1
	1	False	153.0	2.0	1
		True	128.0	2.0	1
64	0	False	120.0	2.0	1
			121.0	2.0	1
			148.0	4.0	1
			176.0	4.0	1
63	0	False	322.0	4.0	1
			278.0	3.0	1
64	0	False	270.0	4.0	1
63	0	False	256.0	2.0	1
62	0	False	401.0	4.0	1
			412.0	4.0	1
			434.0	2.0	1
		True	155.0	2.0	1
			349.0	4.0	1
			363.0	1.0	1
			403.0	3.0	1
	1	False	316.0	1.0	1
			326.0	3.0	1
			347.0	1.0	1
			367.0	4.0	1
63	0	False	120.0	4.0	1
			139.0	4.0	1
			150.0	1.0	1
			152.0	4.0	1
			166.0	4.0	1
			233.0	4.0	1
64	0	False	226.0	3.0	1
			274.0	2.0	1
70	0	True	148.0	4.0	1
64	1	False	326.0	2.0	1
65	0	False	120.0	1.0	1
			126.0	1.0	1
			135.0	4.0	1
			159.0	4.0	1
			177.0	1.0	1
			179.0	3.0	1
			224.0	2.0	1
			286.0	3.0	1
			301.0	2.0	1
			328.0	4.0	1
			356.0	3.0	1
			360.0	4.0	1
			377.0	4.0	1
			417.0	4.0	1
		True	533.0	4.0	1
	1	False	120.0	4.0	1
			123.0	4.0	1
64	1	False	330.0	3.0	1
			304.0	1.0	1
	0	False	314.0	4.0	1
	1	False	292.0	4.0	1
	0	False	322.0	2.0	1
			330.0	3.0	1
			336.0	3.0	1
			349.0	4.0	1
			354.0	3.0	1
			358.0	2.0	1

			393.0	3.0	1
			396.0	3.0	1
			397.0	3.0	1
			407.0	4.0	1
		True	139.0	4.0	1
			192.0	4.0	1
			391.0	3.0	1
	1	False	161.0	3.0	1
			174.0	4.0	1
			246.0	4.0	1
			252.0	4.0	1
62	0	False	399.0	2.0	1
			395.0	3.0	1
			379.0	3.0	1
60	1	False	213.0	4.0	1
			296.0	2.0	1
			305.0	2.0	1
			317.0	3.0	1
			333.0	4.0	1
			365.0	2.0	1
			1000.0	4.0	1
61	0	False	120.0	4.0	1
			130.0	4.0	1
			191.0	4.0	1
			223.0	2.0	1
			232.0	4.0	1
			246.0	2.0	1
			259.0	4.0	1
			290.0	4.0	1
			301.0	4.0	1
			336.0	4.0	1
			362.0	2.0	1
60	1	False	255.0	4.0	1
			201.0	4.0	1
62	0	False	369.0	4.0	1
60	1	False	136.0	1.0	1
	0	False	309.0	4.0	1
			318.0	4.0	1
			328.0	4.0	1
			334.0	3.0	1
			344.0	4.0	1
			350.0	3.0	1
			351.0	2.0	1
				4.0	1
			371.0	4.0	1
			372.0	4.0	1
			379.0	2.0	1
		True	120.0	2.0	1
			145.0	3.0	1
			276.0	4.0	1
			342.0	2.0	1
	1	False	120.0	4.0	1
			131.0	4.0	1
61	0	False	365.0	4.0	1
			382.0	1.0	1
			400.0	4.0	1
			413.0	4.0	1
62	0	False	180.0	4.0	1
			187.0	4.0	1
			202.0	2.0	1
			207.0	3.0	1
			212.0	1.0	1
			213.0	1.0	1
			291.0	4.0	1
			299.0	1.0	1
			308.0	4.0	1

			318.0	3.0	1
			332.0	4.0	1
			342.0	4.0	1
			343.0	4.0	1
			344.0	4.0	1
			350.0	4.0	1
			352.0	3.0	1
			367.0	4.0	1
			163.0	4.0	1
			120.0	4.0	1
				3.0	1
61	0	True	306.0	2.0	1
		False	415.0	3.0	1
			435.0	4.0	1
			458.0	3.0	1
			683.0	2.0	1
			716.0	4.0	1
		True	141.0	3.0	1
			228.0	2.0	1
			319.0	4.0	1
	1	False	400.0	4.0	1
	0	True	353.0	4.0	1
			361.0	4.0	1
			363.0	2.0	1
			372.0	2.0	1
			389.0	4.0	1
	1	False	315.0	4.0	1
			321.0	1.0	1
65	1	False	284.0	4.0	1
			295.0	4.0	1
			297.0	3.0	1
69	0	False	172.0	2.0	1
			237.0	3.0	1
			265.0	2.0	1
			303.0	4.0	1
			310.0	4.0	1
			311.0	2.0	1
			312.0	4.0	1
			315.0	2.0	1
			319.0	1.0	1
			329.0	4.0	1
			330.0	2.0	1
			333.0	1.0	1
			336.0	3.0	1
			341.0	3.0	1
			343.0	1.0	1
			351.0	2.0	1
			361.0	4.0	1
			362.0	3.0	1
			177.0	4.0	1
68	0	True	345.0	4.0	1
		False	289.0	4.0	1
		True	266.0	1.0	1
		False	292.0	2.0	1
			294.0	4.0	1
			295.0	4.0	1
			332.0	1.0	1
			336.0	2.0	1
			337.0	4.0	1
			359.0	2.0	1
			360.0	4.0	1
			377.0	4.0	1
			379.0	2.0	1
			394.0	4.0	1
			402.0	4.0	1
			408.0	2.0	1

			413.0	3.0	1
			424.0	4.0	1
			1437.0	4.0	1
		True	203.0	3.0	1
69	0	False	367.0	4.0	1
			368.0	4.0	1
			371.0	4.0	1
			390.0	2.0	1
70	0	False	221.0	4.0	1
			263.0	4.0	1
			315.0	4.0	1
			316.0	4.0	1
			319.0	4.0	1
			324.0	4.0	1
			327.0	3.0	1
			350.0	2.0	1
			351.0	2.0	1
			358.0	3.0	1
			368.0	4.0	1
			369.0	2.0	1
			371.0	4.0	1
			385.0	2.0	1
			391.0	4.0	1
			609.0	2.0	1
			712.0	4.0	1
			198.0	4.0	1
			187.0	4.0	1
			183.0	4.0	1
69	0	True	458.0	4.0	1
		False	402.0	4.0	1
			408.0	4.0	1
			412.0	4.0	1
		True	286.0	3.0	1
			314.0	4.0	1
			377.0	4.0	1
			400.0	3.0	1
	1	False	208.0	2.0	1
70	0	False	156.0	4.0	1
69	1	False	353.0	4.0	1
			392.0	1.0	1
		True	159.0	4.0	1
			215.0	4.0	1
70	0	False	125.0	4.0	1
			134.0	4.0	1
			150.0	4.0	1
68	0	False	291.0	4.0	1
			254.0	4.0	1
65	1	False	353.0	4.0	1
66	0	False	357.0	2.0	1
			371.0	4.0	1
			383.0	4.0	1
			389.0	4.0	1
			399.0	2.0	1
			400.0	4.0	1
			582.0	4.0	1
			604.0	3.0	1
		True	298.0	3.0	1
			403.0	4.0	1
	1	False	174.0	4.0	1
			177.0	4.0	1
			303.0	3.0	1
			335.0	2.0	1
67	0	False	126.0	2.0	1
			150.0	4.0	1
			156.0	4.0	1
			170.0	1.0	1

```
          66   0    False    364.0        4.0       1
                             347.0        2.0       1
          68   0    False    247.0        3.0       1
          66   0    False    337.0        2.0       1
                             141.0        1.0       1
                             142.0        3.0       1
                             149.0        3.0       1
                             170.0        2.0       1
                             207.0        3.0       1
                             218.0        1.0       1
                             232.0        2.0       1
                             251.0        1.0       1
                             255.0        1.0       1
                             280.0        2.0       1
                             294.0        3.0       1
                             295.0        2.0       1
                             312.0        4.0       1
                             317.0        3.0       1
                             318.0        2.0       1
                             323.0        4.0       1
                             332.0        4.0       1
          67   0    False    183.0        2.0       1
                             305.0        4.0       1
                             313.0        4.0       1
                             315.0        4.0       1
                    True     359.0        4.0       1
                             899.0        4.0       1
               1    False    165.0        3.0       1
                             251.0        4.0       1
                             315.0        1.0       1
                             337.0        3.0       1
                             368.0        2.0       1
                             522.0        4.0       1
                    True     226.0        4.0       1
          68   0    False    120.0        2.0       1
                             140.0        4.0       1
                             155.0        4.0       1
                             170.0        4.0       1
                             210.0        3.0       1
                             214.0        3.0       1
                             238.0        4.0       1
                             246.0        4.0       1
          67   0    True     325.0        2.0       1
                             320.0        4.0       1
                             300.0        4.0       1
                    False    372.0        3.0       1
                             327.0        3.0       1
                             332.0        2.0       1
                             334.0        2.0       1
                             343.0        4.0       1
                             354.0        3.0       1
                                          4.0       1
                             364.0        4.0       1
                             372.0        4.0       1
                    True     283.0        4.0       1
                    False    375.0        4.0       1
                             388.0        4.0       1
                             394.0        4.0       1
                             416.0        4.0       1
                             460.0        4.0       1
                             525.0        3.0       1
                    True     120.0        4.0       1
D         78   1    True     673.0        1.0       1
dtype: int64
```

In [231…
```
final_table.head()
```

Out[231]:

	Status	Age	Sex	Ascites	Cholesterol	Stage
0	D	58	0	True	261.0	4.0
1	C	56	0	False	302.0	3.0
2	D	70	1	False	176.0	4.0
3	D	54	0	False	244.0	4.0
4	CL	38	0	False	279.0	3.0

In [232…
```
# Your existing final_table DataFrame
# Replace this with your actual data
# Assuming your DataFrame already has 'Age', 'Sex', and 'Ascites' columns
# You can add more columns as needed

# Group by 'Age', 'Sex', and 'Ascites' and count occurrences
result = final_table.groupby(['Age', 'Sex', 'Ascites']).size().reset_index(name='Count')

# Pivot the table
pivot_table = result.pivot_table(index=['Age', 'Sex'], columns='Ascites', values='Count'

# Convert column names to strings
pivot_table.columns = pivot_table.columns.map(str)

# Flatten the MultiIndex column headers by joining levels
pivot_table.columns = [' '.join(col).strip() for col in pivot_table.columns.values]

# Reset the index
pivot_table.reset_index(inplace=True)

# Print the resulting pivot table
print(pivot_table)
```

```
    Age  Sex  F a l s e  T r u e
0    26    0          6        0
1    27    0          2        0
2    27    1          1        0
3    28    0          2        2
4    29    0          4        1
5    29    1          2        0
6    30    0          8        0
7    30    1          1        0
8    31    0          2        1
9    31    1          1        0
10   32    0          8        0
11   32    1          1        0
12   33    0         10        0
13   33    1          2        0
14   34    0          9        1
15   35    0         15        0
16   35    1          2        0
17   36    0         18        1
18   36    1          1        1
19   37    0         20        2
20   37    1          2        0
21   38    0         21        4
22   38    1          0        1
23   39    0         14        2
24   39    1          3        0
25   40    0         18        2
26   40    1          4        0
27   41    0         31        3
```

28	41	1	1	1
29	42	0	31	1
30	42	1	1	1
31	43	0	22	4
32	43	1	6	2
33	44	0	35	6
34	44	1	9	1
35	45	0	28	5
36	45	1	8	1
37	46	0	35	4
38	46	1	2	0
39	47	0	40	7
40	47	1	4	1
41	48	0	44	5
42	48	1	5	1
43	49	0	53	3
44	49	1	7	0
45	50	0	38	8
46	50	1	4	0
47	51	0	40	4
48	51	1	6	0
49	52	0	44	9
50	52	1	12	1
51	53	0	47	7
52	53	1	7	0
53	54	0	63	4
54	54	1	9	1
55	55	0	54	7
56	55	1	8	1
57	56	0	69	10
58	56	1	7	0
59	57	0	44	2
60	57	1	7	3
61	58	0	47	8
62	58	1	6	0
63	59	0	50	11
64	59	1	8	3
65	60	0	40	6
66	60	1	15	0
67	61	0	35	16
68	61	1	11	0
69	62	0	57	5
70	62	1	5	3
71	63	0	51	5
72	63	1	2	1
73	64	0	44	5
74	64	1	10	1
75	65	0	33	5
76	65	1	9	0
77	66	0	41	3
78	66	1	6	0
79	67	0	52	8
80	67	1	9	2
81	68	0	54	5
82	68	1	5	1
83	69	0	52	8
84	69	1	8	3
85	70	0	56	9
86	70	1	9	0
87	71	0	47	6
88	71	1	10	0
89	72	0	35	8
90	72	1	8	0
91	73	0	42	8
92	73	1	11	2
93	74	0	43	9

94	74	1	8	1
95	75	0	44	4
96	75	1	11	2
97	76	0	56	7
98	76	1	5	1
99	77	0	36	5
100	77	1	10	2
101	78	0	335	39
102	78	1	69	3

In [233…

```
# Assuming your DataFrame is named final_table
# Group by 'Age', 'Sex', and 'Ascites' and count occurrences
result = final_table.groupby(['Age', 'Sex', 'Ascites']).size().reset_index(name='Count')

# Print the resulting table
print(result)
```

	Age	Sex	Ascites	Count
0	26	0	False	6
1	27	0	False	2
2	27	1	False	1
3	28	0	False	2
4	28	0	True	2
5	29	0	False	4
6	29	0	True	1
7	29	1	False	2
8	30	0	False	8
9	30	1	False	1
10	31	0	False	2
11	31	0	True	1
12	31	1	False	1
13	32	0	False	8
14	32	1	False	1
15	33	0	False	10
16	33	1	False	2
17	34	0	False	9
18	34	0	True	1
19	35	0	False	15
20	35	1	False	2
21	36	0	False	18
22	36	0	True	1
23	36	1	False	1
24	36	1	True	1
25	37	0	False	20
26	37	0	True	2
27	37	1	False	2
28	38	0	False	21
29	38	0	True	4
30	38	1	True	1
31	39	0	False	14
32	39	0	True	2
33	39	1	False	3
34	40	0	False	18
35	40	0	True	2
36	40	1	False	4
37	41	0	False	31
38	41	0	True	3
39	41	1	False	1
40	41	1	True	1
41	42	0	False	31
42	42	0	True	1
43	42	1	False	1
44	42	1	True	1
45	43	0	False	22
46	43	0	True	4
47	43	1	False	6

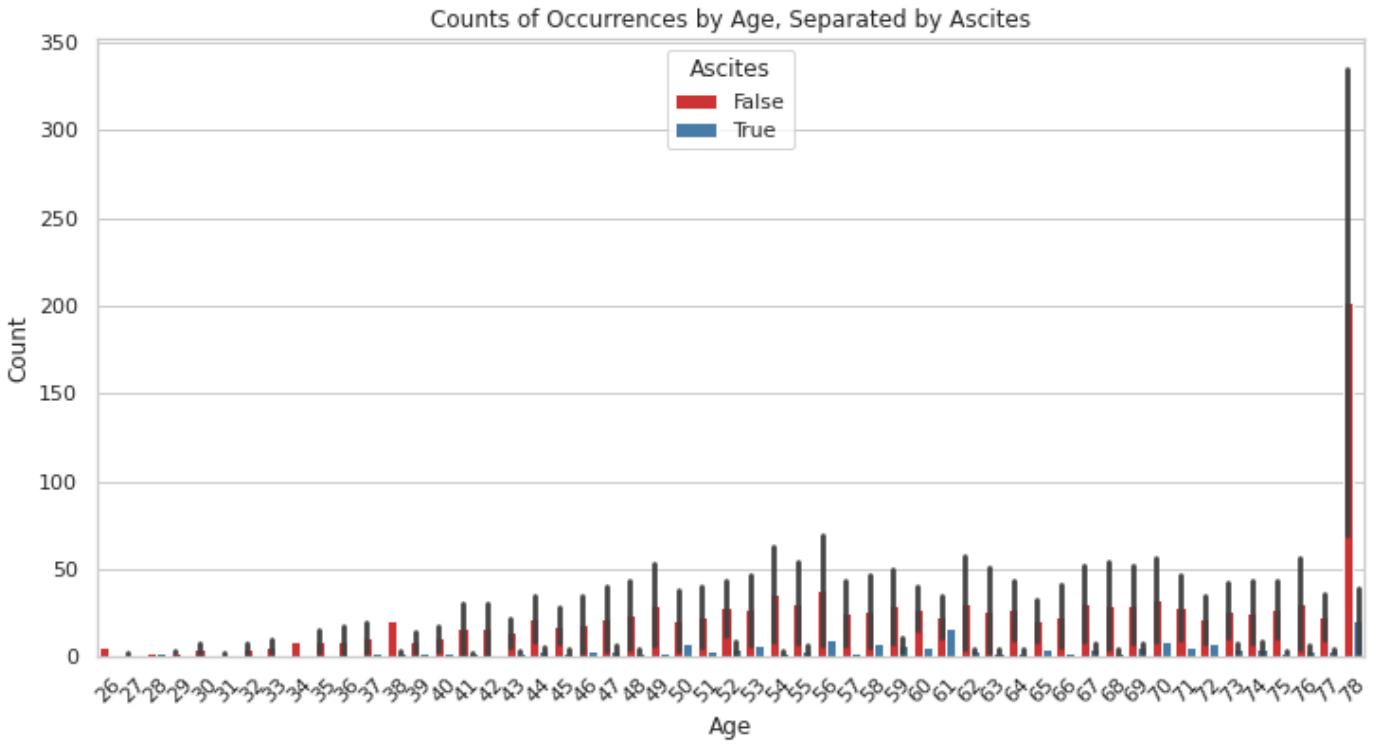
48	43	1	True	2
49	44	0	False	35
50	44	0	True	6
51	44	1	False	9
52	44	1	True	1
53	45	0	False	28
54	45	0	True	5
55	45	1	False	8
56	45	1	True	1
57	46	0	False	35
58	46	0	True	4
59	46	1	False	2
60	47	0	False	40
61	47	0	True	7
62	47	1	False	4
63	47	1	True	1
64	48	0	False	44
65	48	0	True	5
66	48	1	False	5
67	48	1	True	1
68	49	0	False	53
69	49	0	True	3
70	49	1	False	7
71	50	0	False	38
72	50	0	True	8
73	50	1	False	4
74	51	0	False	40
75	51	0	True	4
76	51	1	False	6
77	52	0	False	44
78	52	0	True	9
79	52	1	False	12
80	52	1	True	1
81	53	0	False	47
82	53	0	True	7
83	53	1	False	7
84	54	0	False	63
85	54	0	True	4
86	54	1	False	9
87	54	1	True	1
88	55	0	False	54
89	55	0	True	7
90	55	1	False	8
91	55	1	True	1
92	56	0	False	69
93	56	0	True	10
94	56	1	False	7
95	57	0	False	44
96	57	0	True	2
97	57	1	False	7
98	57	1	True	3
99	58	0	False	47
100	58	0	True	8
101	58	1	False	6
102	59	0	False	50
103	59	0	True	11
104	59	1	False	8
105	59	1	True	3
106	60	0	False	40
107	60	0	True	6
108	60	1	False	15
109	61	0	False	35
110	61	0	True	16
111	61	1	False	11
112	62	0	False	57
113	62	0	True	5

114	62	1	False	5
115	62	1	True	3
116	63	0	False	51
117	63	0	True	5
118	63	1	False	2
119	63	1	True	1
120	64	0	False	44
121	64	0	True	5
122	64	1	False	10
123	64	1	True	1
124	65	0	False	33
125	65	0	True	5
126	65	1	False	9
127	66	0	False	41
128	66	0	True	3
129	66	1	False	6
130	67	0	False	52
131	67	0	True	8
132	67	1	False	9
133	67	1	True	2
134	68	0	False	54
135	68	0	True	5
136	68	1	False	5
137	68	1	True	1
138	69	0	False	52
139	69	0	True	8
140	69	1	False	8
141	69	1	True	3
142	70	0	False	56
143	70	0	True	9
144	70	1	False	9
145	71	0	False	47
146	71	0	True	6
147	71	1	False	10
148	72	0	False	35
149	72	0	True	8
150	72	1	False	8
151	73	0	False	42
152	73	0	True	8
153	73	1	False	11
154	73	1	True	2
155	74	0	False	43
156	74	0	True	9
157	74	1	False	8
158	74	1	True	1
159	75	0	False	44
160	75	0	True	4
161	75	1	False	11
162	75	1	True	2
163	76	0	False	56
164	76	0	True	7
165	76	1	False	5
166	76	1	True	1
167	77	0	False	36
168	77	0	True	5
169	77	1	False	10
170	77	1	True	2
171	78	0	False	335
172	78	0	True	39
173	78	1	False	69
174	78	1	True	3

In [234…

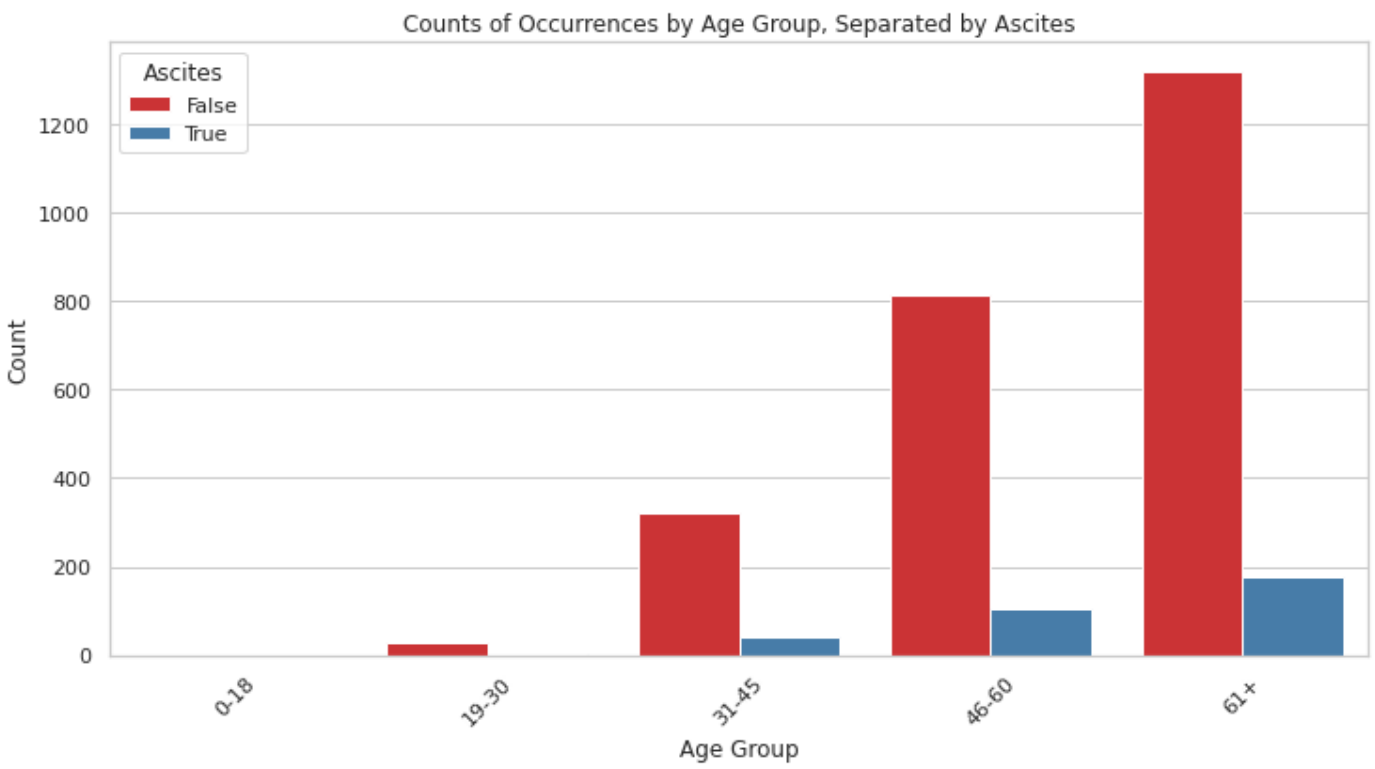
```
# Assuming your DataFrame is named result
# Create a bar plot using Seaborn
plt.figure(figsize=(12, 6))
sns.barplot(x='Age', y='Count', hue='Ascites', data=result, palette='Set1')
```

```
plt.title('Counts of Occurrences by Age, Separated by Ascites')
plt.xlabel('Age')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.show()
```



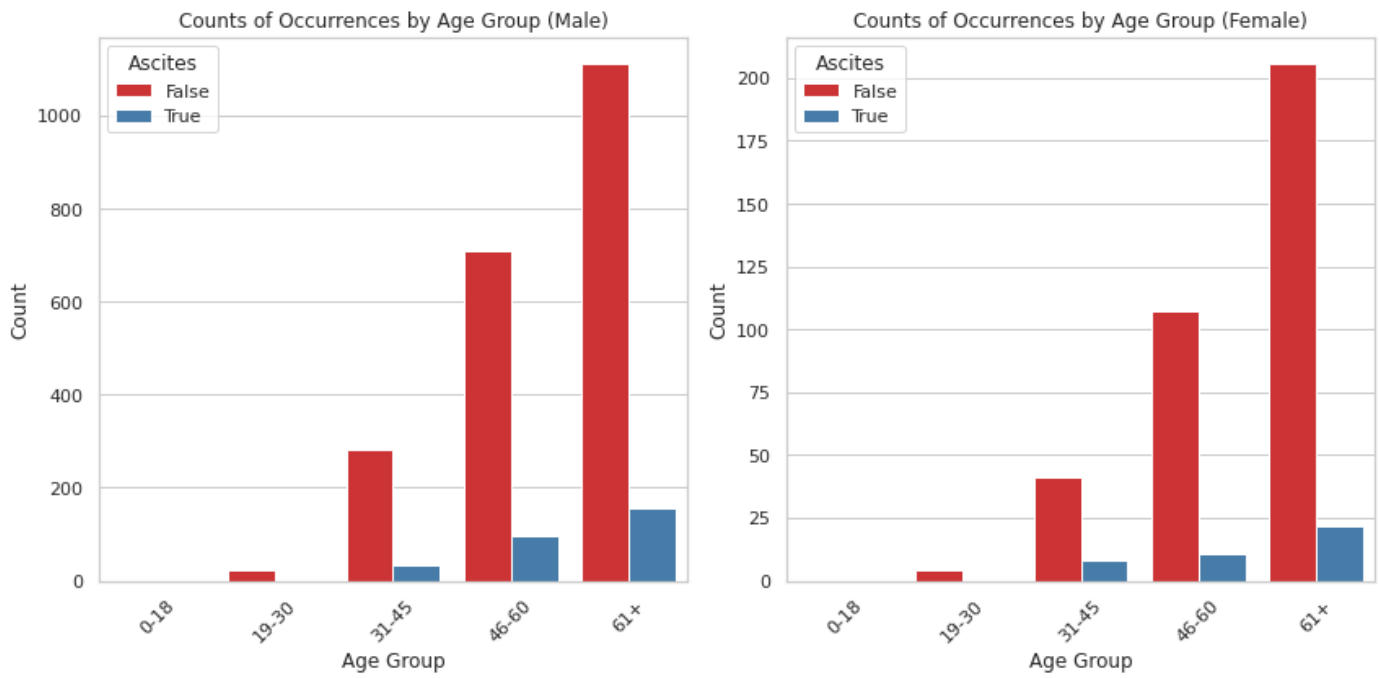
In [235…

```
# Assuming your DataFrame is named result
# Create age groups
result['Age Group'] = pd.cut(result['Age'], bins=[0, 18, 30, 45, 60, 100], labels=['0-18

# Calculate the sum of counts for each age group, separated by Ascites
age_group_counts = result.groupby(['Age Group', 'Ascites'])['Count'].sum().reset_index()

# Create a bar plot using Seaborn
plt.figure(figsize=(12, 6))
sns.barplot(x='Age Group', y='Count', hue='Ascites', data=age_group_counts, palette='Set
plt.title('Counts of Occurrences by Age Group, Separated by Ascites')
plt.xlabel('Age Group')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.show()
```



In [236…

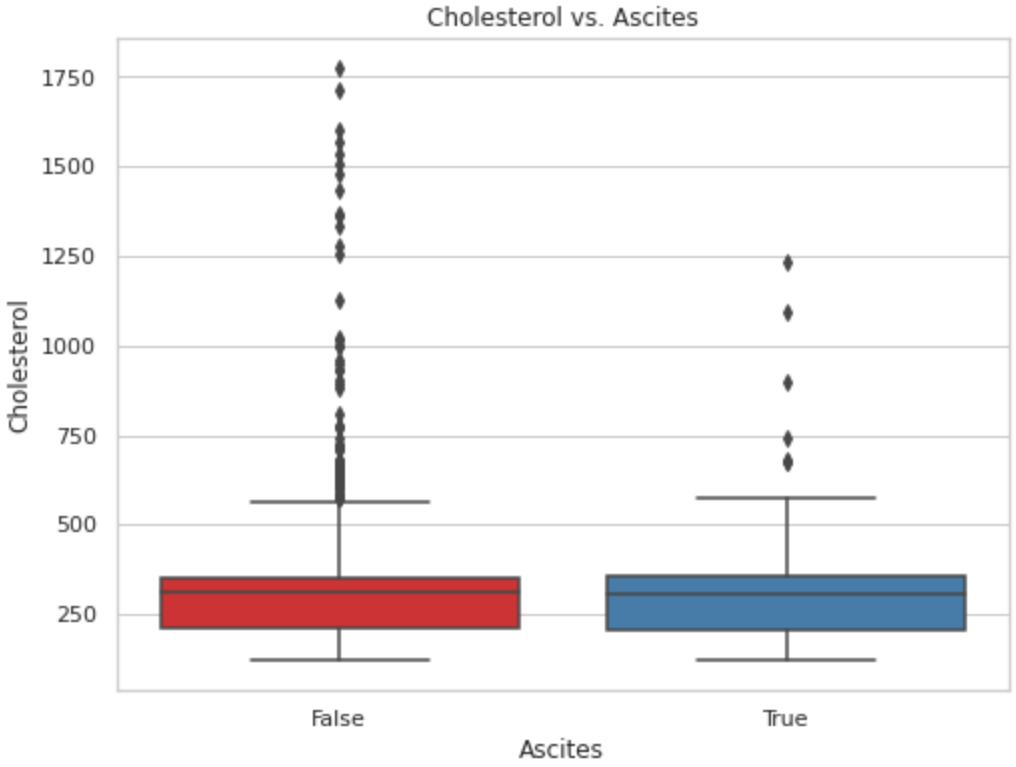
```
# Assuming your DataFrame is named result
# Create age groups
result['Age Group'] = pd.cut(result['Age'], bins=[0, 18, 30, 45, 60, 100], labels=['0-18

# Calculate the sum of counts for each age group, separated by Ascites, and Sex
age_group_counts = result.groupby(['Age Group', 'Ascites', 'Sex'])['Count'].sum().reset_

# Filter the data for males
male_data = age_group_counts[age_group_counts['Sex'] == 0]

# Filter the data for females
female_data = age_group_counts[age_group_counts['Sex'] == 1]

# Create separate bar plots for male and female using Seaborn
plt.figure(figsize=(12, 6))
plt.subplot(1, 2, 1)  # Create a subplot for males
sns.barplot(x='Age Group', y='Count', hue='Ascites', data=male_data, palette='Set1', ci=
plt.title('Counts of Occurrences by Age Group (Male)')
plt.xlabel('Age Group')
plt.ylabel('Count')
plt.xticks(rotation=45)

plt.subplot(1, 2, 2)  # Create a subplot for females
sns.barplot(x='Age Group', y='Count', hue='Ascites', data=female_data, palette='Set1', c
plt.title('Counts of Occurrences by Age Group (Female)')
plt.xlabel('Age Group')
plt.ylabel('Count')
plt.xticks(rotation=45)

plt.tight_layout()  # Ensure proper spacing between subplots
plt.show()
```



In [237…
```
final_table.info()
```

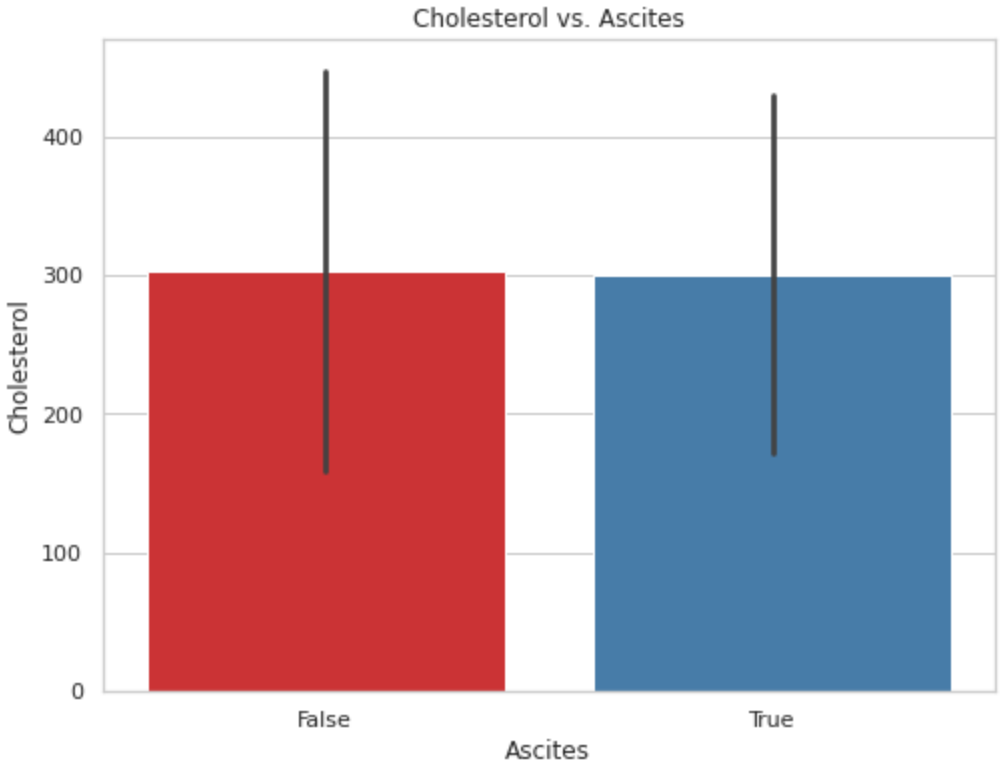
```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 2809 entries, 0 to 10415
Data columns (total 6 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   Status       2809 non-null   object 
 1   Age          2809 non-null   int64  
 2   Sex          2809 non-null   int64  
 3   Ascites      2809 non-null   object 
 4   Cholesterol  2809 non-null   float64
 5   Stage        2809 non-null   float64
dtypes: float64(2), int64(2), object(2)
memory usage: 153.6+ KB
```

In [238…
```
# Assuming your DataFrame is named final_table
plt.figure(figsize=(8, 6))
sns.boxplot(x='Ascites', y='Cholesterol', data=final_table, palette='Set1')
plt.title('Cholesterol vs. Ascites')
plt.xlabel('Ascites')
plt.ylabel('Cholesterol')
plt.show()
```



In [239…

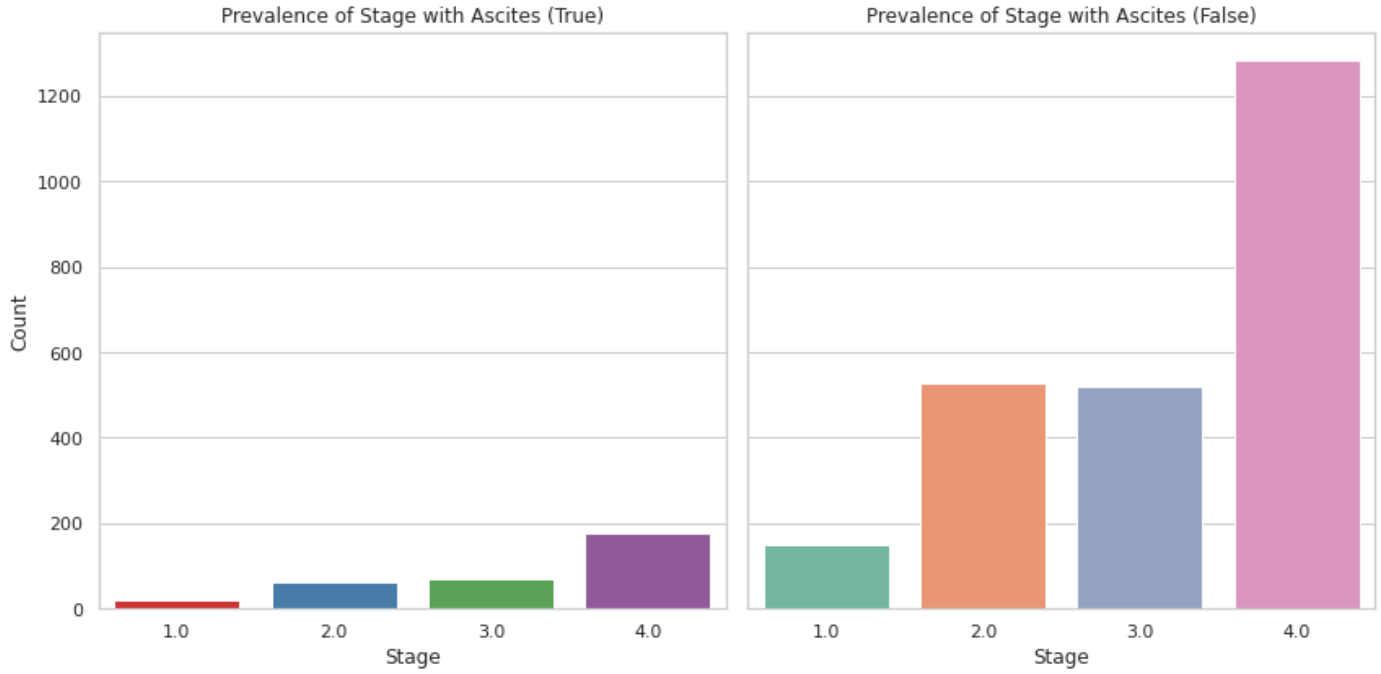
```
# Assuming your DataFrame is named final_table
plt.figure(figsize=(8, 6))
sns.barplot(x='Ascites', y='Cholesterol', data=final_table, ci='sd', palette='Set1')
plt.title('Cholesterol vs. Ascites')
plt.xlabel('Ascites')
plt.ylabel('Cholesterol')
plt.show()
```



In [240…

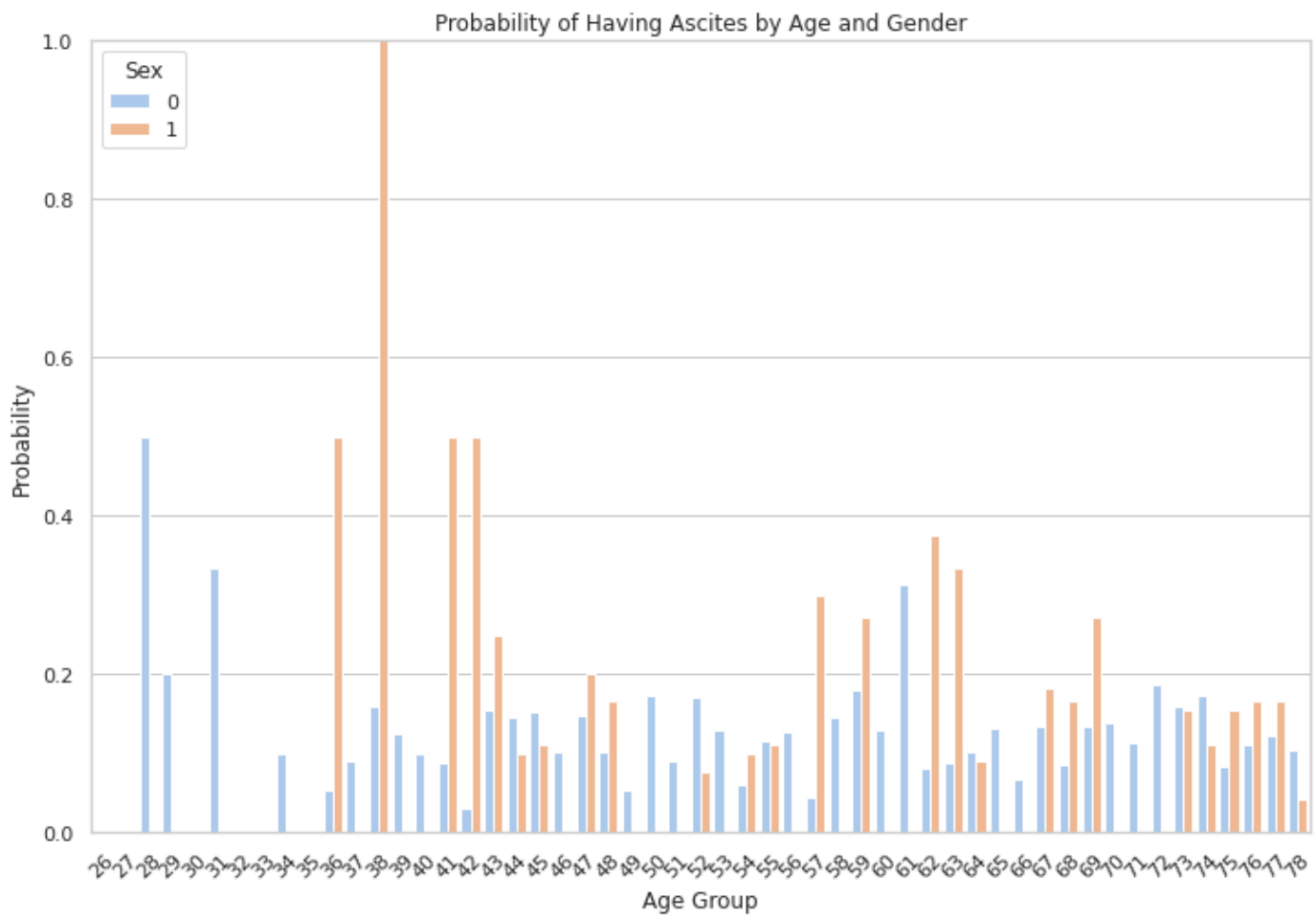
```
# Create subplots for True and False Ascites
fig, axes = plt.subplots(1, 2, figsize=(12, 6), sharey=True)

# Filter data for True and False Ascites
ascites_true = final_table[final_table['Ascites'] == True]
ascites_false = final_table[final_table['Ascites'] == False]
```

```
# Plot bar charts for each Ascites category
sns.countplot(x='Stage', data=ascites_true, palette='Set1', ax=axes[0])
sns.countplot(x='Stage', data=ascites_false, palette='Set2', ax=axes[1])

# Set titles and labels
axes[0].set_title('Prevalence of Stage with Ascites (True)')
axes[1].set_title('Prevalence of Stage with Ascites (False)')
axes[0].set_xlabel('Stage')
axes[1].set_xlabel('Stage')
axes[0].set_ylabel('Count')
axes[1].set_ylabel('')

# Adjust spacing between subplots
plt.tight_layout()
plt.show()
```



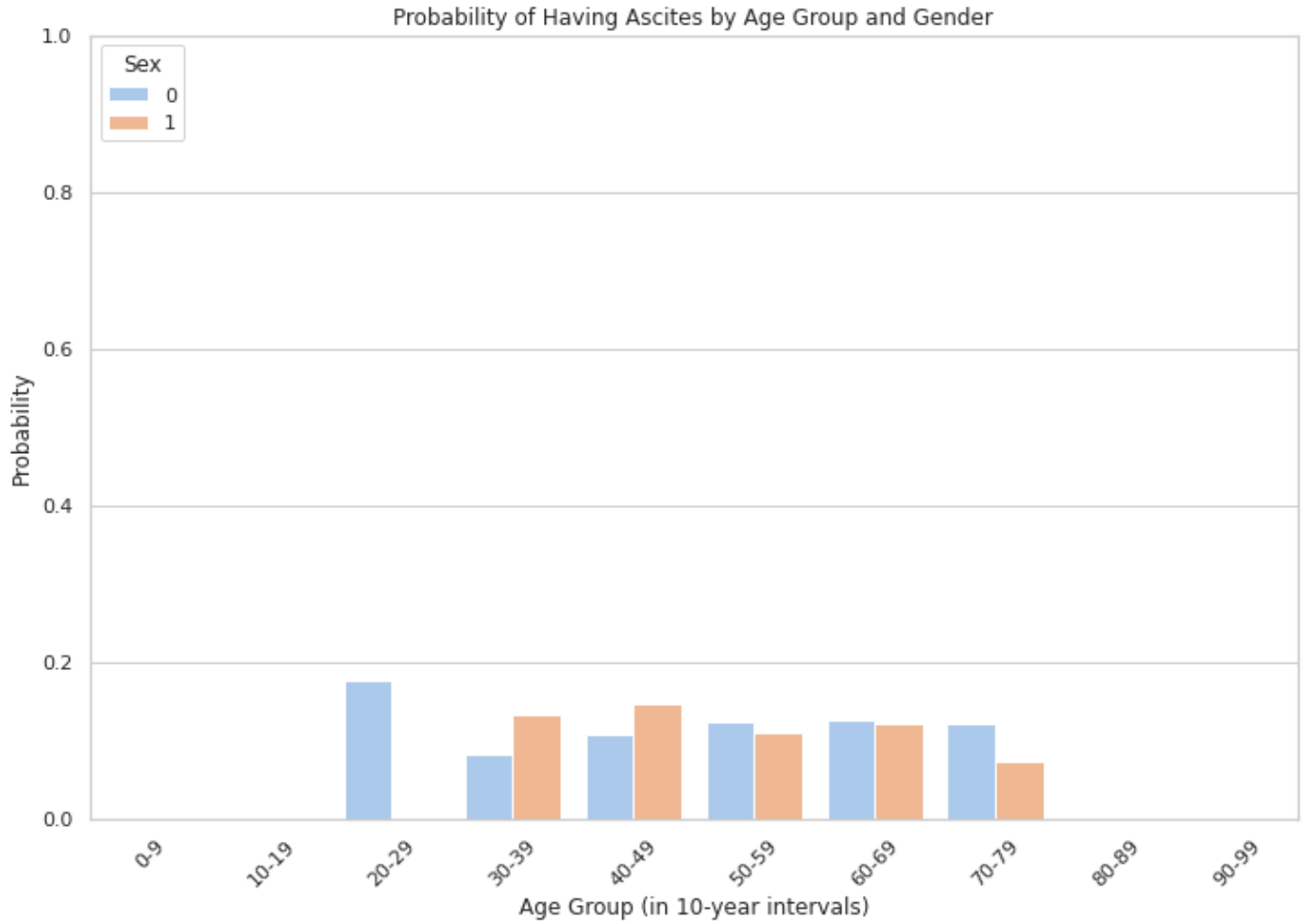
In [241…

```
# Calculate probabilities by age, gender, and ascites
probabilities = final_table.groupby(['Age', 'Sex', 'Ascites']).size().unstack(fill_value
probabilities['Probability'] = probabilities[True] / (probabilities[True] + probabilitie

# Reset the index for plotting
probabilities.reset_index(inplace=True)

# Create a stacked bar chart
plt.figure(figsize=(12, 8))
sns.set(style="whitegrid")
sns.barplot(x='Age', y='Probability', hue='Sex', data=probabilities, palette='pastel')
plt.title('Probability of Having Ascites by Age and Gender')
plt.xlabel('Age Group')
plt.ylabel('Probability')
plt.legend(title='Sex', loc='upper left')
plt.ylim(0, 1)  # Set y-axis limit to 0-1 for probabilities
plt.xticks(rotation=45)
plt.show()
```



In [242…

```
# Define age groups in 10-year intervals
final_table['Age Group'] = pd.cut(final_table['Age'], bins=range(0, 101, 10), right=Fals

# Calculate probabilities by age group, gender, and ascites
probabilities = final_table.groupby(['Age Group', 'Sex', 'Ascites']).size().unstack(fill
probabilities['Probability'] = probabilities[True] / (probabilities[True] + probabilitie

# Reset the index for plotting
probabilities.reset_index(inplace=True)

# Create a stacked bar chart
plt.figure(figsize=(12, 8))
sns.set(style="whitegrid")
sns.barplot(x='Age Group', y='Probability', hue='Sex', data=probabilities, palette='past
plt.title('Probability of Having Ascites by Age Group and Gender')
plt.xlabel('Age Group (in 10-year intervals)')
plt.ylabel('Probability')
plt.legend(title='Sex', loc='upper left')
plt.ylim(0, 1)  # Set y-axis limit to 0-1 for probabilities
plt.xticks(rotation=45)
plt.show()
```



Analysis made by **Alan Santos**, for ***Rise4Wellness***