Conditional Probability & Bayes Rule Quiz

```python
In [1]:   # load dataset
          import pandas as pd

          df = pd.read_csv('cancer_test_data.csv')
          df.head()
```

Out[1]:

	patient_id	test_result	has_cancer
0	79452	Negative	False
1	81667	Positive	True
2	76297	Negative	False
3	36593	Negative	False
4	53717	Negative	False

```python
In [2]:   # What proportion of patients who tested positive has cancer?
          df.query('test_result == "Positive"')['has_cancer'].mean()
```

Out[2]: 0.34282178217821785

```python
In [3]:   # What proportion of patients who tested positive doesn't have cancer?
          1 - df.query('test_result == "Positive"')['has_cancer'].mean()
```

Out[3]: 0.65717821782178221

```python
In [4]:   # What proportion of patients who tested negative has cancer?
          df.query('test_result == "Negative"')['has_cancer'].mean()
```

Out[4]: 0.013770180436847104

```python
In [5]:   # What proportion of patients who tested negative doesn't have cancer?
          1 - df.query('test_result == "Negative"')['has_cancer'].mean()
```

Out[5]: 0.98622981956315292

```python
In [ ]:
```