

#4. a).

Pclass: This plot shows that survive rate for first-class passengers is the highest, and it's extremely low on survive rate of third-class passengers. which is:  
$$P(S=1 | \pi=1) > P(S=1 | \pi=2) > P(S=1 | \pi=3)$$

sex: Shows that Passenger with sex = 0 are most likely survive, and sex = 1 are most likely not survive. Expect that 0 for female and 1 for male, this feature is a good one to reduce entropy in dataset.

Age: Only children below 10 years old has higher survive rate than dead rate. Most people are in range 20-40 years old, but they have lower survive rate than other age.

SibSp: This plot shows that passengers with 1 or 2 siblings or spouses have higher survive rate.

Parch: This plot shows that most people don't have parent/child on board, but people with 1 or 2 parent/child on board have higher survive rate.

Fare: This plot shows most people has no fare. People with fare have much higher survive rate.

Embarked: People embarked at .0 has highest survive rate.