Name: Date:

**Math 215 Test 3(Show work or not credit will be given) due: 07/16/2019**

**1)**

| | Survived | Did Not Survived | Total |
|---|---|---|---|
| First Class Passengers | 201 | 123 | 324 |
| Second Class Passengers | 118 | 166 | 284 |
| Third Class Passengers | 181 | 528 | 709 |
| Total Passengers | 500 | 817 | 1317 |

Find the indicated probabilities below using classical probability (normal)

a) P(Passengers that survived)

b) P(First class passengers that did not survive $\cup$ Passengers that did not survive)

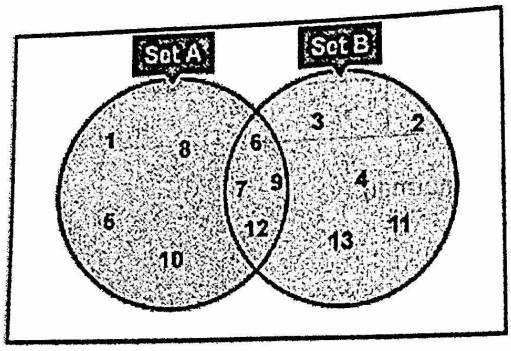
c) $P(\overline{Third\ class\ passengers\ that\ survive})$

**2)** What is the event of getting a sum of 10 when rolling a dice (two die)

3)

a) Are sets A and B mutually exclusive or Not mutually exclusive for the image below?_____

b) What is the **sample space** for set A below (Must use proper notation)?_____




4) What is **the event** of getting a number less than 1, when rolling a die (must use proper notation)?

5) What is the **sample space** of tossing two coins (must use proper notation)?

6) What is **the event** of getting a number greater than or equal to 4, when rolling a die (must use proper notation)?

7) What is the **probability** of getting a number greater than or equal to 4, when rolling a die (must use proper notation)?

8) What is the event of getting at least one tail tossing two coins?

9) What is the **probability** of getting a numbered card from a deck of cards? (There are 13 cards per suit, and 4 suits. The suits are diamond, hearts, spade, and clubs. There are 2 black suits, and 2 red suits of cards.

10) **What is the probability of getting a face card or a numbered card from a normal deck of cards?** (Must use proper notation)?( face cards are cards that have a human face on it)

**11) What is the probability of not getting a face card from a normal deck of cards?** (Must use proper notation)? (Face cards are cards that have a human face on it)

# Some Formulas

1) $P(A)+ P(B)$

2) $P(A) + P(B) - P(A \wedge B)$

3) Note: The ace card is not considered 1 for this test