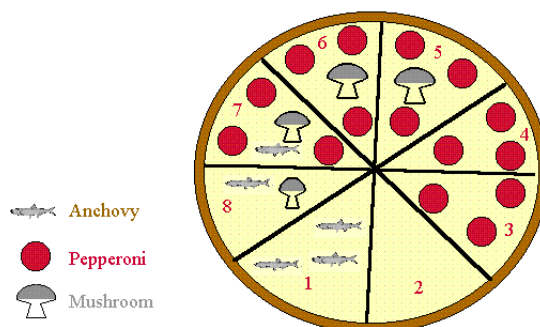**Name: _____**

Probability

Exercise 1: Hala has a pizza containing anchovy, pepperoni and mushroom, the ingredients are not equally distributed. Some pieces contain all the three, others contain none, Hala's friend wants to pick a piece randomly. Refer to the figure to find the probabilities:

1. P(the piece has pepperoni)
2. P(has mushrooms)
3. P(does not have anchovies)
4. P(the piece has both pepperoni and anchovies)
5. P(the piece has either pepperoni or mushrooms or both)
6. P(the piece has either pepperoni or is plain or both)

Exercise 2: Hala has a pizza containing anchovy, pepperoni and mushroom, the ingredients are not equally distributed. Some pieces contain all the three, others contain none, Hala's friend wants to pick two different pieces randomly. Refer to the figure to find the probabilities:

1) P(the first piece you pick will have pepperoni)
2) P(the second piece has pepperoni given that your first piece had pepperoni)
3) P(both pieces have pepperoni)
4) P(both pieces have anchovies)
5) P(neither piece has anchovies)
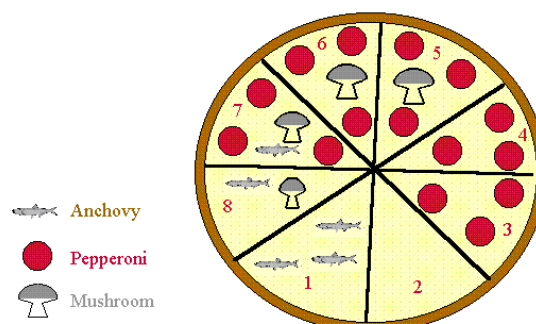
Exercise 3: Two dice are thrown. Refer to the 2 dice roll outcomes to decide the *probability* of each of the following events.

1) The sum of the numbers showing is 7.
2) Both dice show the same number.
3) The dice show different numbers.
4) The sum of the numbers showing is 4 or

6.

(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)