Name:_____   Date:_____

Assign 6 Math Challengers: Dependent Events

1. A bag contain 3 white balls and 2 black balls. The first draw was a white ball and was not replaced. What is the probability that the second draw will produce another white ball?

2. A bag contain 3 white balls and 2 black balls. What is the probability that the first ball is white and the second ball is black. No replacement

3. A bag contain 4 red and 5 blue. If two balls are taken, what is the probability that there is one red and one blue?

4. A bag contains 4 red and 5 blue. If two balls are taken, what is the probability that the second one is blue. No replacement.

5. Bag A contains 3 red and 4 blue. Bag B contains 5 red and 6 blue. A marble is drawn from bag A and then placed into bagB. Afterwards, if two marbles are drawn from bag B, what is the probability that both are red?

6. If two dice are rolled, what is the probability that the sum of the two rolls is greater than 6 and the first roll is less than 4?

7. Two dice are rolled. What is the probability that the product is even?

8. Three dice are rolled. What is the probability that the sum is less than 6?

9. James rolls two dice and takes the sum. Sam rolls another two dice and takes the sum. What is the probability that the product of James's sum and Sam's roll will be a multiple of 3? Express your answer as a common fraction

10. There are two bags, Bag A has 3 red and 4 blue, Bag B has 5red and 2 blue. Two dice are rolled and the sum is taken. If the sum is prime then a marble is chosen from bag A, otherwise it's chosen from bagB. What is the probability that the marble chosen will be red?

11. There are six balls in an urn, with number 1, 2, 3, 4, 5, and 6 written on them. You reach into the urn and simultaneously remove two randomly chosen balls. What is the probability that the sum of the numbers on these two balls is equal to 6? Express your answer as a common fraction.