Secondary Math II   Name:_____
9-1 Fundamental Counting Principle   Period:_____

Part 1: Probability
A bag contains 3 white cards, 2 black cards, and 5 red cards. Find the probability of each event for one draw:

1. A white card   2. A black card   3. A red card

Calculate the probability of each event for one roll of a 6 sided die:

4. A one   5. A four   6. An even number   7. An odd number

8. A number less than 3   9. A number greater than 3   10. A number greater than 6

11. A number less than or equal to 3   12. A number greater than or equal to 5

Part 2: Fundamental Counting Principle.
Find the total number of license plates possible:

13. 2 letters followed by 3 digits   14. 3 letters followed by 4 digits

15. A letter followed by 3 digits followed by 2 letters   16. Six digits

17. 2 letters followed by 4 digits   18. 4 letters followed by 2 digits

19. A letter followed by 4 digits followed by a letter   20. Five letters

Draw a tree diagram for the following situations, and find the total possible number of outcomes:

21. The Pie Pizzeria offers a special price on a 2-topping pizza. You can choose 1 topping from each of the following groups:
A) provolone cheese or extra mozzarella cheese
B) pepperoni, sausage, or Canadian bacon

22. A student wants to get involved in one of each extracurricular activity:
Sports: track, football, volleyball
Arts: choir, band
Academic Clubs: science, math

23. A retired person wants to get involved in one of each type of leisure activity:
Indoor: reading, watching television, playing board games
Outdoor: biking, gardening, hiking

Answer Key

1. $\dfrac{3}{10}$

3. $\dfrac{1}{2}$

5. $\dfrac{1}{6}$

7. $\dfrac{1}{2}$

9. $\dfrac{1}{2}$

11. $\dfrac{1}{2}$

13. 676,000

15. 17,576,000

17. 6,760,000

19. 6,760,000

21. 6 outcomes

23. 9 outcomes