

Name: _____

Period: _____

Worksheet 9-1
Fundamental Counting Principle
& Probability

Unit 9

1. A school team sells caps in two colors (blue or white), two sizes (child or adult), and two fabrics (cotton or polyester). Draw a tree diagram to help find the number of cap choices.

Blue

White

2. You can buy a burrito made from a flour tortilla or a corn tortilla. You have a choice of three fillings: beef, chicken, or beans. You can also choose medium salsa or hot salsa on top.

Draw a tree diagram to find all possible combinations.

3. Julie has finally narrowed her clothing choices for the big party down to 3 skirts, 2 tops, and 4 pairs of shoes. How many different outfits could she form from these choices?

4. Utah license plates have 3 numbers followed by 3 letters. How many different license plates of this type can be issued in Utah?

5. How many different 7-digit telephone numbers can be assigned if the first digit cannot be either a “1” or a “0” and the numbers can’t be repeated?

Find each probability for one roll of a die. Write your answer as a simplified fraction.

6. $P(5)$

8. $P(\text{not } 1, 3, 4, \text{ or } 5)$

7. $P(7)$

9. $P(2 \text{ or } 4)$

You have a bag of 24 colored cubes: 12 red, 4 blue, 5 green, and 3 yellow. Find the probability of randomly pulling the given color out of a bag. Write your answer as a reduced fraction and a %.

10. $P(\text{green})$

14. $P(\text{orange})$

11. $P(\text{red or yellow})$

15. $P(\text{red, blue, or yellow})$

12. $P(\text{blue})$

16. $P(\text{not green or blue})$

13. $P(\text{not blue})$

You have 10 candy bars. Four are Twix, three are Butterfinger, two are Snickers, and one is a Milky Way. You let your friend pick a candy bar. Find the probability of randomly pulling out the given candy bar. Write your answer as a reduced fraction and a %.

17. $P(\text{Snickers})$

21. $P(\text{complement of Butterfinger})$

18. $P(\text{complement of Milky Way})$

22. $P(\text{Butterfinger, Snickers, or Milky Way})$

19. $P(\text{Twix})$

23. $P(\text{Milky Way or Twix})$

20. $P(\text{Twix or Milky Way})$

24. $P(\text{Twix}) + P(\text{complement of Twix})$