**UNIT 7 REVIEW GUIDE – Probability**

|  |  |  |
| --- | --- | --- |
|  | **Stone Mountain Park** | **Six Flags Park** |
| **Anne** |  | $$√$$ |
| **Karley** | $$√$$ |  |
| **Carson** | $$√$$ |  |
| **Debra** |  |  |
| **James** | $$√$$ | $$√$$ |
| **Michelle** | $$√$$ |  |
| **Brandon** |  | $$√$$ |
| **Luke** |  |  |
| **Eddie** | $$√$$ |  |
| **Frank** | $$√$$ | $$√$$ |

A teacher asked her students which of them went to Stone Mountain Park and which of them went to Six Flags over the summer break. She created the following chart:

1. Create a Venn diagram for the chart above:

**Stone Mt.**

**Six Flags**

2. How many students went to Stone Mountain Ո Six Flags over summer break?

3. How many students went to Stone Mountain U Six Flags over summer break?

4. How many students went to Stone Mountain but did NOT go to Six Flags over summer break?

 **5.** How many students did NOT go to Stone Mountain or Six Flags over summer break?

**Given the following Venn diagram, write the subset for each of the following:**



**6. (Math)’**

**7. (LA)**

**8. (Science U LA)**

**9. (Math Ո Science’)**

**10. (LA Ո Math Ո Science)**

**11. Give an example of theoretical probability.**

**12. Give an example of empirical probability.**

**13. Give an example of subjective probability.**



**14. What is the probability of spinning the spinner and the arrow landing
 on the number “3”?**

**15. What is the probability of spinning the spinner and the arrow landing
 on the number “2” or “3”?**



**16. What is the probability of spinning the spinner three times and having all
 three spins be less than 4?**

**17. What is the probability of spinning the spinner three times and having all
 three spins be greater than 2?**

 **18. A repair person is scheduled to be at your apartment between 10:00am to 12:00pm but you have to leave
 at 11:30 to help out a friend. If the repair person is equally likely to be at your apartment any time during
 the appointment time, what is the probability that you will be there?**

**19. A repair person is scheduled to be at your apartment between 8:00am to 12:00pm but you have to leave
 at 10:30 to help out a friend. If the repair person is equally likely to be at your apartment any time during
 the appointment time, what is the probability that you will be there?**

**20. Janet has a rectangular back yard with a circular swimming pool. Her yard is 70 feet by 40 feet. Her
 swimming pool has a diameter of 16 feet. If your neighbor kicked a ball over the fence and into Janet’s
 back yard, what is the probability that the ball lands in the swimming pool?**

 **70 feet

 16 feet 40 feet**

**Given a standard deck of shuffled
cards answer the following:**

**21. Probability of drawing a Club?**

**22. P(Four | Diamond)**

 **23. P(Five | Black Card)**

**24. P(Face Card | Spade)**

 **25. P(Diamond U Face Card)**

 **26. P(Face Card U Diamond)**

**27. A card is randomly drawn from a shuffled deck of cards and NOT REPLACED. A second card is drawn from
 the remaining shuffled cards. What is the approximate probability that both cards are Red?**

 **28. In a French class there are 9 male students and 5 female students. A student is randomly selected to go to
 the front office and leaves. A second student is randomly selcted to go to the office. What is the
 approximate probabilty that both students that left were male students?**

**29. A jar contains 5 red marbles, 3 blue marbles, and 7 green marbles. What is the probability of pulling a red
 marble and then a blue marble (without replacement)?**

**30. A jar contains 5 red marbles, 3 blue marbles, and 7 green marbles. What is the probability of pulling a red
 marble and then a blue marble and then a green marble (with replacement)?**

**Given the following table with information about
a sample of students from Phoenix High School
and where they live, if a person is randomly
selected determine the probability of the following:**

**31. P(Female | Stone Mountain)**

 **32. P(Male | Suwanee)**

**33. Given the P(B) = 0.6 and the P(A|B) = 0.2, determine the P(A and B).** $P(A | B) =\frac{P\left(A and B\right)}{P\left(B\right)}$

**34. Given P(A) = 0.2 and P(B) = 0.5, determine the P(A or B) if the two events are mutually inclusive.**

**35. Given P(A) = 0.2 and P(B) = 0.5 and P(A and B) = 0.1 determine the P(A or B) if the two events are inclusive.**

**Use the Venn Diagram to answer the following:**

**36. P(A U B)**

 **37. P(A U B’)**

 **38. P(A Ո B)**

 **Use the following table to answer the following questions:**



**39. What percentage of all students joined the Cooking class?**

**40. What percentage of boys joined the Cooking class?**

**41. What percentage of girls joined the Cooking class?**