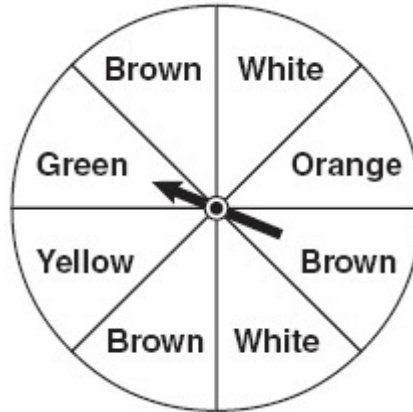


Name _____
Mr. Schlansky

Date _____
Algebra II

Probability of Conjunctions and Disjunctions

1. What is the probability that the spinner



a) lands on white?

b) does not land on white?

c) lands on orange?

d) does not land on orange?

e) lands on brown?

f) does not land on brown?

g) lands on yellow?

h) does not land on yellow?

i) lands on green?

j) does not land on green?

k) lands on white or green?

l) lands on green or yellow?

m) Lands on white or brown?

n) Lands on orange or yellow?

o) Lands on green or white?

2. The probability of event A is .27. The probability of event B is .36. The probability of both events happening is .11. What is the probability that event A or event B happens?

3. The probability of event A is 78%. The probability of event B is 49%. The probability of both events happening is 31%. What is the probability that event A or event B happens?

4. The probability of event A is 87%. The probability of event B is 70%. The probability of both events happened in 60%. What is the probability of event A or event B happens?

5. The probability of event A happening is 14% and the probability of event B happening is 18%, The probability that event A or event B happens is 20%. What is the probability that event A and event B happens?

6. The probability of event A happening is 72% and the probability of event B happening is 62%. The probability that event A or event B happens is 81%. What is the probability that event A and event B happens?

7. The probability of event A happening is .47 and the probability that event B happens is .91. The probability that event A or event B happens is .93. What is the probability that event A and event B happens?

8. The probability that a student in Jacqua High School is in band is $\frac{127}{466}$ and the probability that a student is on the track team is $\frac{82}{466}$. If the probability that they are on the track team and in band is $\frac{74}{466}$, what is the probability that they are on the track and or in band?

9. The probability that a person files their tax return in March is $\frac{127}{165}$. The probability that a person watches College Basketball in March is $\frac{98}{123}$. If the probability that a person watches College Basketball and files their tax return in March is $\frac{62}{95}$, what is the probability that a person watches College Basketball or files their tax return? Round your answer to the nearest percent.

10. The probability that Chloe the cardinal shows up in the Schlansky's backyard is $\frac{12}{19}$. The probability that Chloe shows up in the Silverman's backyard is $\frac{10}{17}$. If the probability that Chloe shows up in the Schlansky's backyard or the Silverman's backyard is $\frac{12}{16}$, what is the probability that Chloe shows up in both backyards?

11. The probability that a student in Mr. Orkofsky's first period class passes the Regents is $\frac{25}{26}$ and the probability that a student in his period 8 class passes the Regents is $\frac{17}{19}$. If the probability that a student in period 1 or period 8 passing the Regents is $\frac{27}{28}$, what is the probability that a student passes the regents in period 1 and period 8? Round your answer to the nearest percent.

12. There is a 30% chance it will snow on Sunday. There is a 45% chance it will rain on Sunday. There is a 50% chance it will snow and rain on Sunday. What is the probability that it will snow or rain on Sunday?

13. In 2015 at Sabres Prep Academy, the probability that a student passed Algebra II was 78%. The probability that a student passed Chemistry was 86%. The probability they passed Algebra II or Chemistry was 88%. What is the probability that they *did not* pass Algebra II and Chemistry?

14. A suburban high school has a population of 1376 students. The number of students who participate in sports is 649. The number of students who participate in music is 433. If the probability that a student participates in either sports or music is $\frac{974}{1376}$, what is the probability that a student participates in both sports and music?

15. There are 24 students in a math class. 15 of them play a sport and 20 of them play an instrument. 22 play a sport or play an instrument. What is the probability that a student chosen at random will play a sport and play an instrument?

16. Over the past 30 nights, Baxter barked 8 nights and cried 15 nights. He barked or cried 11 nights. How many nights did he bark and cry?