1. List the sample space for the spinner.

2. Michael owns fifteen pairs of pants and 80 polos. How many different outfits can he choose from?
3. Find the intersection of $A$ and $B$.
$A=\{1,2,3,4,5,6,7,8,9\}$
$B=\{3,6,9,12,15,18\}$
4. A fruit bowl contains 4 green apples 7 red apples, and 3 yellow apples. What is the probability that a randomly selected apple will be green or yellow?
5. Which is a subset of $M$ ? $M=\{0,1,2,3,4,5,6\}$
$A=\{0,2,4,6\}$
$P=\{1,3,5,7\}$
$R=\{1,2,3,4,5,6,7,8\}$
6. Samantha rolls a die, what is the likelihood that she rolls an odd number or a number larger than 2 ?
7. P(double) $\qquad$
8. $P($ a sum less than 5$)$ or $P($ even sum $)$ $\qquad$

9. P (double) or P (odd sum) $\qquad$

A math teacher at EPHS was interested to see how many students like each subject.

|  | Math | English | Social Studies |  |
| :---: | :---: | :---: | :---: | :---: |
| Male | 35 | 15 | 50 |  |
| Female | 40 | 20 | 30 |  |
|  |  |  |  |  |

12. Find $P($ Social Studies) $\qquad$
13. Find $P($ Social Studies)' $\qquad$
14. Find $P($ Female | Math $)$ $\qquad$
15. Find $P($ Math | Female) $\qquad$
16. Find $P($ Male $\cap$ Social Studies) $\qquad$
17. Find $P($ Male $\cup$ Social Studies $)$ $\qquad$

Use the Venn diagram to find the following probabilities.
18. P(Chinese) $\qquad$
19. P (Spanish $\cap$ Chinese) $\qquad$
20. P (Spanish $\cup$ Chinses) $\qquad$


Questions 22-25. Decide if each set of events is independent or dependent.
22. $P(A)=0.5 ; P(B)=0.3 ; P(A \cap B)=0.125$ $\qquad$
23. $P(A)=\frac{1}{2} ; P(B)=\frac{2}{5} ; P(A \cap B)=\frac{1}{5}$ $\qquad$
24. A boy chooses a marble from a bag, puts it back in the bag, then chooses a second marble. $\qquad$
25. A girl chooses a marble from a bag, does not put it back in the bag, then chooses a second marble. $\qquad$
Using the letters in DALLAS:
26. Find the probability of picking an $A$ and then another $A$ with replacement. $\qquad$
27. Find the probability of picking an $A$ and then another $A$ without replacement. $\qquad$
28. Find the probability of picking a $L$ and then a $A$ with replacement. $\qquad$
29. Find the probability of picking a L and then a A without replacement. $\qquad$

A jar contains 7 red, 5 green, 2 blue, and 6 yellow marbles.
30. What is the probability of chosing a green and then a red marble with replacement. $\qquad$
31. What is the probability of chosing a green and then a red marble without replacement. $\qquad$
32. What is the probability of chosing a blue and then a red marble without replacement. $\qquad$
33. What is the probability of chosing a blue and then anohter blue marble without replacement. $\qquad$

