**Unit 10 Study Guide Name:**

In a bowl of marbles, there are 10 red ones, 6 green ones, and 8 blue ones.

1. If a marble is chosen at random from the bowl, find P(red one or a blue one)?
2. If two marbles are chosen at random with replacement, find P(red and a blue)?
3. If two marbles are chosen at random without replacement, find P(they are both red)?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| + | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |

A person rolls two dice, one after the other.

1. P(even sum) **or** P(sum of 9)
2. P(odd sum) **or** P(sum less than 5)
3. What is the probability that the sum of two rolls

 is an even number **given** at least one of the rolls is a 4?

A card is chosen from a standard deck of cards. The drawer is looking for clubs and face cards.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Club | Not a Club |  |
| Face card | 3 | 9 |  |
| Not a face card | 10 | 30 |  |
|   |  |  |  |

1. Find P(Club)
2. Find P(Club | Not a Face Card)
3. Find P(Club  Face Card)
4. Find P(Not a Club  Not a Face Card)
5. Are the events Club and Not a Face Card Independent of each other?
6. In a Coordinate Algebra class, 22 students were male and 10 students were female. Out of those students, 11 of the guys and 4 of the girls passed the EOCT. If a person is chosen at random from the class, what is the probability of choosing a girl or a person that did NOT pass the EOCT?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Pass | Not Pass |  |
| Male |  |  |  |
| Female |  |  |  |
|  |  |  |  |

**Directions: Use the given sets to answer each question.**

*U = {3, 7, 11, 12, 15, 18, 20, 22, 24, 25} A = {11, 18, 24, 25}*

*B = {prime numbers} C = {3, 7, 12, 18, 20, 24}*

13) $A∪C$ 14) $B∩C$ 15) $\left(A∩C\right)∪B$

16) $\left(B∪C\right)^{'}$ 17) B – C 18) C – B

In a survey of 450 people, 200 of whom are female, it was found that 225 prefer chocolate ice cream including 99 males. Use this information to complete the table below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Males | Females |  |
| Vanilla |  |  |  |
| Chocolate |  |  |  |
|  |  |  | 450 |

 19. The person likes chocolate.

20. The person like vanilla, given they are male.

21. The person likes vanilla or is a female.

22. Are being a male and liking chocolate independent events?

**Directions: Shade the regions that represent the following sets.**



 25. What is the P(getting a pair of Ace’s from a deck of cards l one Ace)?

 26. What is the probability of flipping a coin three times and getting heads all three times?

 27. What is the probability of getting a sum of 4 on a pair of dices and selecting the letter

 G from GABEL?