

Name: _____ Date: _____

UNIT 8 TEST REVIEW

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 $P(\text{red one or a blue one})$?
- _____ 2. If two marbles are chosen at random with replacement, find $P(\text{red and a blue})$?
- _____ 3. If two marbles are chosen at random without replacement, find $P(\text{they are both red})$?

A person rolls two dice, one after the other.

- _____ 4. $P(\text{even sum})$ **or** $P(\text{sum of 9})$
- _____ 5. $P(\text{odd sum})$ **or** $P(\text{sum less than 5})$
- _____ 6. What is the probability that the sum of two rolls is an even number **given** at least one of the rolls is a 4?

+	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

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

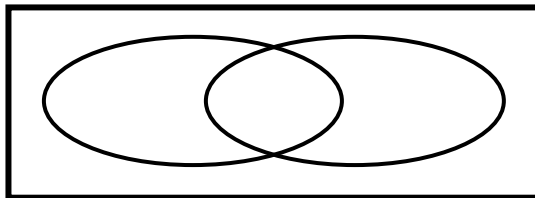
	Club	Not a Club	
Face card	3	9	
Not a face card	10	30	

- _____ 7. Find $P(\text{Club})$
- _____ 8. Find $P(\text{Club} \mid \text{Not a Face Card})$
- _____ 9. Find $P(\text{Club} \cap \text{Face Card})$
- _____ 10. Find $P(\text{Not a Club} \cup \text{Not a Face Card})$
- _____ 11. Are the events Club and Not a Face Card Independent of each other?

- _____ 12. 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			

13.



Of 500 athletes surveyed, 300 were male and 20 were left-handed. Only 8 of the left-handed athletes were female.

_____ 14. What is the probability that an athlete was male or was left-handed?

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

Find the probability that:

_____ 15. The person likes chocolate.

_____ 16. The person likes vanilla, given they are male.

_____ 17. The person likes vanilla or is a female.

_____ 18. Are being a male and liking chocolate independent events?

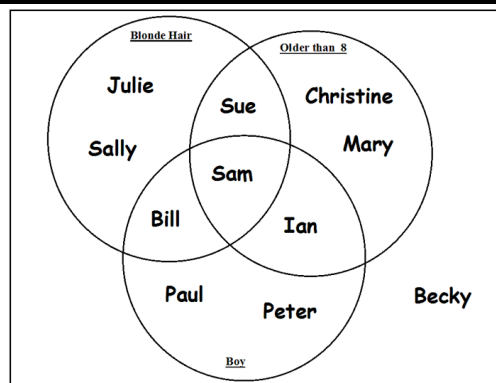
Use the Venn diagram to find the following probabilities.

_____ 19. $P(\text{blonde hair})$

_____ 20. $P(\text{blonde hair} \cap \text{Boy})$

_____ 21. $P(\text{Older than 8} \cup \text{Boy})$

_____ 22. $P(\text{Older than 8} \cup \text{Boy})'$



_____ 23. The probability of a randomly chosen boy playing basketball is 0.30. The chance that a boy plays both basketball and football is 0.05. The chance that a boy plays football is 0.25. What is the probability that a randomly chosen boy plays basketball or football?

_____ 24. Assume that the following events are dependent:

- The probability that a high school student eats breakfast is 0.8.
- The probability that a high school senior will eat breakfast and get over 6 hours of sleep is 0.2.

What is the probability that a high school senior will get over 6 hours of sleep, given that the person ate breakfast?

