

1. (2) Five boys participated in a fishing contest. Tom caught more fish than Bob, Sam caught the least number of fish. Mark caught more fish than Tom or Bob. Allen caught the most fish. Who won third prize?

2. (6) The Jones, Wallace, and Baker families live on the same street. Beth, Todd, and Cindy are friends and don't belong to the same family. Mr. Jones is a salesman. Cindy doesn't have any brothers or sisters. The Wallaces live in an apartment with their son and daughter. Todd's father works in a bank and lives in a two story house. What are the first and last names of the three friends?

3. (2) What is the next number in the sequence: 1, 2, 6, 24, 120...

4. (2) When Jack tried to teach his dog Butch to roll over, he gave him 1 treat and he rolled over once. When he gave him 2 treats, he rolled over twice. Then he gave him 3 treats, and Butch rolled over three times. Jack predicted that Butch would roll over four times if he gave him 4 treats. What type of reasoning did Jack use to make his prediction?

5. (2) A ninth-grade science class discovered that there is a relationship between the time of the swing of a pendulum and its length. They recorded their results in the chart below. What would be the time of a swing if the length of the pendulum is 17 units?

Time of Swing	Length of Pendulum
1 second	3 units
2 seconds	5 units
3 seconds	7 units
4 seconds	9 units

6. (2)What is the converse of this statement? “If a road sign is red, then it is a stop sign.”

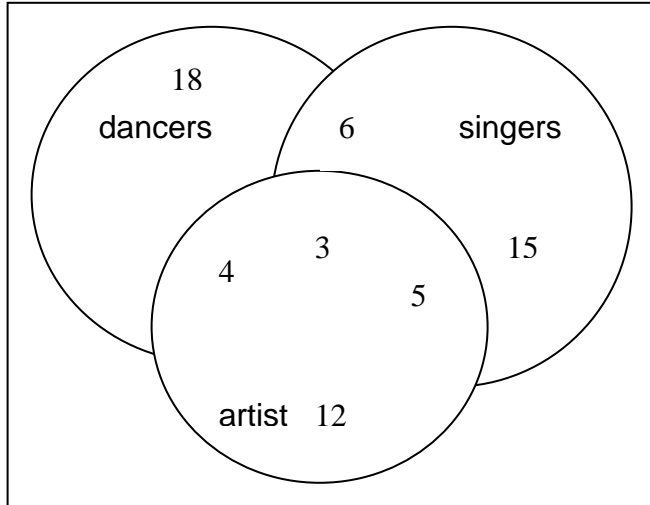
7. (2)Using Bill’s class schedule below, what day is it if Bill just finished his last class at 3:00 PM and has to prepare for both a calculus exam and a political science quiz tomorrow?

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 – 10:00	Amer. Lit.		Amer. Lit		Amer. Lit
10:00 – 11:00		Speech		Speech	
11:00 – 12:00					
12:00 – 1:00					
1:00 – 2:00	Calculus	Calculus	Calculus		Calculus
2:00 – 3:00		Astronomy		Astronomy	
3:00 – 4:00	Political Sci.		Political Sci.		

8. (2)If this statement is always true, then which of the following statements is also always true? “If it is a Saturday afternoon, Albert will go see a movie.”
- A) If it is Wednesday, Albert will not see a movie.
 - B) If Albert does not see a movie, it is not Saturday afternoon.
 - C) If Albert sees a movie, it is Saturday afternoon.
 - D) If it is not Saturday afternoon, Albert will not see a movie.

9. (2)A student’s math teacher gave her class a test on four consecutive Mondays. Today is the fifth Monday. If the student uses inductive reasoning, what is her conclusion?

10. (2)Based on this statement, which of the following must be true? “If John run downhill, it will rain.”
- A) John runs downhill.
 - B) It rains.
 - C) If it rains, John runs downhill.
 - D) If it doesn’t rain, John doesn’t run downhill.



11. (2)Based on this Venn diagram, how many students at Humbolt High School are artist or singers?

12. (12) Julia visited a fast-food restaurant and recorded what the customers chose to put on their hamburgers. A total of 64 people bought hamburgers. Julia recorded whether each person chose ketchup, mustard, pickles, or all three. Her data is recorded in the chart below.

	Ketchup	Mustard	Pickles	All three
Number of People	34	21	28	2

A) Suppose Julia noted the following additional information:

- a. Nine People used only ketchup and pickles.
- b. Ten people used only ketchup and mustard.
- c. Five people used only pickles and mustard.

Fill in the Venn diagram below, with labels. Fill in all possible data.

B) How many people left their burgers plain? Explain your reasoning by referring to your Venn diagram or calculations you used.

