

Name: _____ Date: _____

Use the following to answer questions 1-8:

In a recent hiring period, XYZ Corporation hired 23% of the males who applied and 11% of the females. A lawsuit was contemplated because these numbers seemed to indicate that there was gender discrimination. On closer examination, it was found that XYZ was only hiring for two of its divisions: engineering and secretarial. Applicants applying by gender per department are given in the table below:

	Males applying	Males hired	Females applying	Females hired
Engineering	400	100	20	5
Secretarial	50	5	300	30
Total	450	105	320	35

1. For the engineering division, what was the percent of male applicants hired?
 - A) 22%
 - B) 25%
 - C) 50%
 - D) 30%

2. For the engineering division, what was the percent of female applicants hired?
 - A) 15%
 - B) 13%
 - C) 20%
 - D) 25%

3. What can be observed about the percent of males hired compared to the percent of females hired in the engineering division?
 - A) A higher percentage of males were hired.
 - B) A higher percentage of females were hired.
 - C) The same percentage of males and females were hired.
 - D) Not enough information to make an observation.

4. For the secretarial division, what was the percent of male applicants hired?
 - A) 22%
 - B) 15%
 - C) 10%
 - D) 5%

5. For the secretarial division, what was the percent of female applicants hired?
 - A) 10%
 - B) 13%
 - C) 30%
 - D) 20%

6. What can be observed about the percent of males hired compared to the percent of females hired in the secretarial division?
 - A) A higher percentage of females were hired.
 - B) A higher percentage of males were hired.
 - C) The same percentage of males and females were hired.
 - D) Not enough information to make an observation.

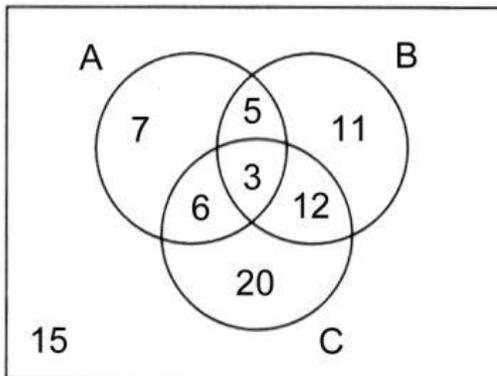
7. Suppose you are an attorney for a female plaintiff. How would you argue that there was gender discrimination?

8. Suppose you are an attorney for XYZ Corporation. How would you argue that there was no gender discrimination?

9. The following is a valid argument: *All dogs bark. Sparky barks. Therefore, Sparky is a dog.*
 - A) True
 - B) False

10. "We can't afford a more expensive home because it will cost more" is an example of what type of informal fallacy?
 - A) False dilemma
 - B) False authority
 - C) Circular reasoning
 - D) Hasty generalization

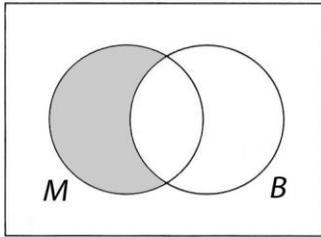
11. “My history teacher says that IBM makes the most reliable computers” is an example of what type of informal fallacy?
- False authority
 - False dilemma
 - False cause
 - Straw man
12. Consider the statement “If it is Sunday, then I will go shopping.” Formulate the converse.
- If it is not Sunday, then I will not go shopping.
 - If I go shopping, then it is Sunday.
 - If I do not go shopping, then it is not Sunday.
 - If I go shopping, then it is not Sunday.
13. Determine whether the given statement is true or false: $3 + 2 = 7$ or $2 + 7 = 9$.
- True
 - False
14. A group of students were surveyed to see how many of them used product A, product B, or product C. Below is a Venn diagram showing the results of the survey:



How many students surveyed used all three products?

- 64
- 38
- 23
- 3

15. Suppose set M is mathematics majors and set B is business majors at a certain university. Then the shaded region in the following Venn diagram represents:



- A) Students majoring in mathematics but not in business
B) Students majoring in business but not mathematics
C) Students majoring in mathematics or in business
D) Students majoring in mathematics and in business
16. Suppose that 100 students were given a biology exam and a chemistry exam. Assume that 36 passed the biology exam but not the chemistry exam, 25 passed the chemistry exam but not the biology exam, and 15 passed neither exam. How many passed the chemistry exam?
- A) 25
B) 64
C) 49
D) 24
17. A gigabyte is how many bytes?
- A) A thousand
B) A million
C) A billion
D) A trillion
18. For charity, a school collects 10 million pennies. How many dollars has the school collected?
- A) \$10,000,000
B) \$1,000,000
C) \$100,000
D) \$10,000

19. A \$1 bill is 6.14 inches long, 2.61 inches wide, and 0.0043 inches thick. If you laid a million \$1 bills side by side lengthwise, how many miles would the trail be (to the nearest mile)?
- A) 1000
 - B) 97
 - C) 1198
 - D) 479
20. It has been projected that the world's population by 2050 will be 9.34 billion people. If the projected U.S. population in 2050 is 438 million, what percent of the world's population will be the U.S. population? Round your answer to the nearest tenth of a percent.
- A) 5.1%
 - B) 4.9%
 - C) 4.7%
 - D) 4.3%