## Venn Diagrams

1. In a class of students, 18 students play football, 12 students play basketball and 5 played both. 3 students didn't play either. How many students were in the class?

2. A survey was conducted among 100 people to determine their favorite fruits. 50 people preferred apples and 60 people preferred bananas. If 30 people preferred both apples and bananas, how many people preferred neither?

3. A company has 60 employees, 35 of whom have a college degree and 20 of whom have a master's degree. If 10 employees have both a college degree and a master's degree, how many employees have neither?

4. In a group of 80 people, 50 people like dogs and 30 people like cats. If 20 people like both dogs and cats, how many people like only dogs?

5. In a school of 500 students, 300 students play a musical instrument and 200 students play a sport. If 100 students play both a musical instrument and a sport, how many students don't participate in either activity?

6. A restaurant offers three types of pizza: pepperoni, cheese, and vegetarian. If 60 customers order pepperoni, 70 customers order cheese, and 40 customers order vegetarian, and 10 customers order both pepperoni and cheese, how many customers order only one type of pizza?

7. In a group of 90 people, 50 people speak Spanish and 40 people speak French. If 20 people speak both Spanish and French, how many people speak only one of the two languages?

8. A survey was conducted among 200 people to determine their preferred type of vacation: beach, city, or mountains. Of the respondents, 100 preferred beach vacations, 80 preferred city vacations, and 60 preferred mountain vacations. If 30 people preferred both beach and city vacations, how many people preferred only mountain vacations?

9. A music streaming service offers three types of music: classical, pop, and rock. Of the 500 subscribers, 250 listen to classical music, 300 listen to pop music, and 200 listen to rock music. If 50 subscribers listen to both classical and pop music, how many subscribers listen to only rock music?

10. A school offers three extracurricular activities: debate club, drama club, and robotics club. Of the 150 students in the school, 50 students are in the debate club, 60 students are in the drama club, and 40 students are in the robotics club. If 20 students are in both debate and drama clubs, how many students are in exactly one club?