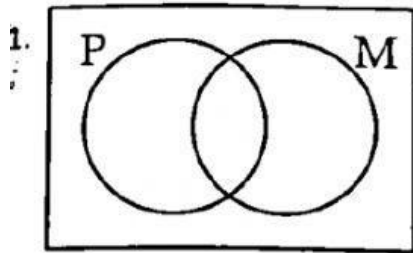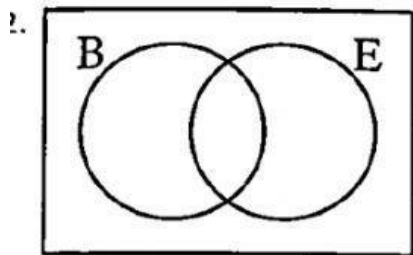Complete the Venn Diagrams and answer the questions that follow.
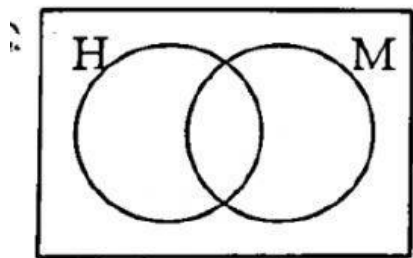
1.

In a group of 100 customers at Big Red's Pizza Emporium, 80 of them ordered mushrooms on their pizza and 72 of them ordered pepperoni. 60 customers ordered both mushrooms and pepperoni on their pizza. How many customers ordered:

a) mushrooms but no pepperoni? _____

b) pepperoni but no mushrooms? _____
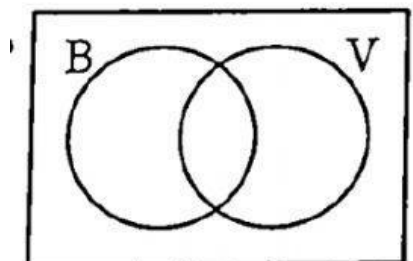
c) neither topping? _____

2.

At Dan's Automotive Shop, 50 cars were inspected. 23 of the cars needed new brakes, 34 needed a new exhaust system. And 6 cars needed neither. How many cars needed:

a) both repairs? _____

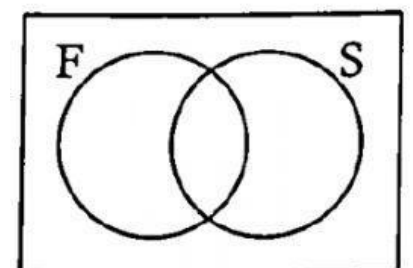b) new brakes but not an exhaust system? _____

A survey of 85 students asked them about the subjects they liked to study. 35 students liked math, 37 liked history. Twenty liked math and history. How many students liked:

a) math or history? _____

b) neither of the two subjects? _____

c) math but not history? _____

Eighty students involved in extracurricular activities were surveyed. Fourteen played both basketball and volleyball. 56 played basketball and 30 played volleyball. How many students:

a) didn't play either sport? _____

b) played volleyball only? _____

c) played basketball only? _____

Twenty-four people go on holiday. If 15 go swimming, 12 go fishing and 6 do neither, how many:

a) go swimming and fishing? _____

b) only went swimming? _____

c) only went fishing? _____