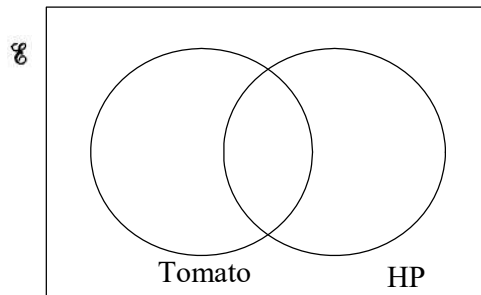
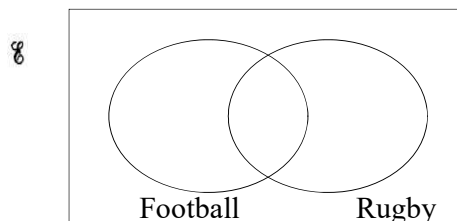


Sets

1. In a class of 20 pupils, 9 like tomato sauce but not HP sauce, 6 like HP sauce but not tomato sauce and 3 like neither. Copy and complete the following Venn diagram.



2. In a class of 30 pupils, 20 like football, 12 like rugby and 4 like neither. Suppose n pupils like both football and rugby.
- (a) Write down an expression, in terms of n , for the number of pupils who:
- like football but not rugby.
 - like rugby but not football.
- (b) Copy and complete the following Venn diagram using n .



- (c) By adding up all four values, find n .
3. In a year of 100 pupils, 70 enjoy Maths, 50 enjoy French and 20 enjoy neither.
- Set up a Venn diagram showing this information.
 - Use this to find the number of pupils who enjoy only one of the subjects.
4. In a shop there were 120 customers on a certain day. 60 paid using notes, 30 paid using coins and 50 paid using neither (cheques, cards etc.)
- Set up a Venn diagram showing this information.
 - Use this to find the number of customers who used both notes and coins.
5. On an Athletics day 150 athletes are running. 60 are in the 100 metres, 50 are in the 200 metres and 80 are in neither.
- Set up a Venn diagram showing this information.
 - Use this to find the number of athletes who ran in only one race.
6. A group of 200 adults were surveyed about holidays. 150 had been to Spain, 80 had been to France. Twice as many had been to both countries as had been to neither country. Suppose n adults had been to neither country.
- Write down an expression for the number of adults who had been to both countries.
 - Set up a Venn diagram using n .
 - Hence find n and set up a new Venn diagram without using n .