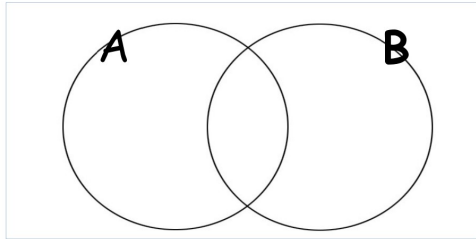


1. Given that  $P(A)=0.9$  find:  $P(A')$ ..... (1)



2. Copy the diagram above and shade the region that represents:  $P(A \cap B)$  (1)

3. Copy the diagram above and shade the region that represents:  $P(A \cup B)$  (1)

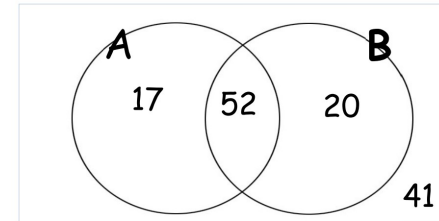
4. Copy the diagram above and shade the region that represents:  $P(A' \cap B')$  (1)

5. Copy the diagram above and shade the region that represents:  $P(A' \cup B)$  (1)

6. Copy the diagram above and shade the region that represents:  $P(A \cap B')$  (1)

7. All members of a club were asked if they eat apples (A) and if they eat bananas (B)

The information was represented on a Venn Diagram



a) How many people are in the club? (1)

A member of the club is selected at random

b) What is the probability they eat both apples and bananas? (1)

Given that a person selected does not eat bananas

c) Find the probability they do not eat apples (2)

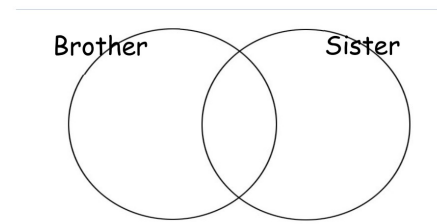
8. Out of 50 people surveyed:

30 have a brother

25 have a sister

6 have neither a brother or a sister

a) Use this information to complete the Venn Diagram

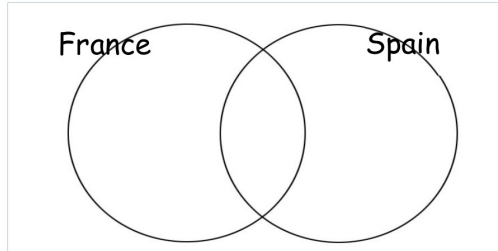


Given that a person selected has a brother

b) Find the probability they also have a sister (3)

9. 40 students were surveyed:  
 20 have visited France  
 15 have visited Spain  
 10 have visited both France and Spain

a) Copy this Venn Diagram and use the information to complete it



(3)

Given that a person selected has visited France

b) Find the probability they have not visited Spain (2)

10. Sami asked 50 people which drinks they liked from tea, coffee and milk.

All 50 people like at least one of the drinks 19 people like all three drinks.  
 16 people like tea and coffee but do not like milk.  
 21 people like coffee and milk.  
 24 people like tea and milk.  
 40 people like coffee.  
 1 person likes only milk.

Sami selects at random one of the 50 people.

a) Work out the probability that this person likes tea (4)

b) Given that the person selected at random from the 50 people likes tea,

find the probability that this person also likes exactly one other drink.

(2)

11. Sami asked 60 people which sports they liked from rugby, football and cricket.

8 people like all three sports.  
 17 people like rugby and football.  
 13 people like football and cricket.  
 19 people like rugby and cricket. 35 people  
 like football. 27 people like cricket 30  
 people like rugby.

b) How many people liked neither rugby or football or cricket? (4)

c) Given that the person selected at random from the 60 people likes cricket  
 find the probability that this person also like rugby (2)