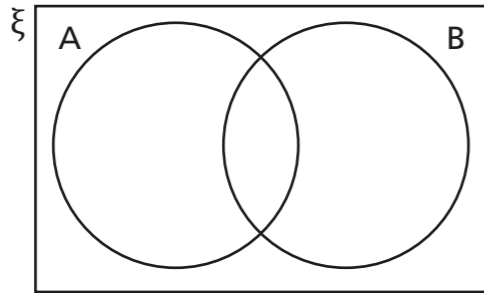


Understand and use the union of sets

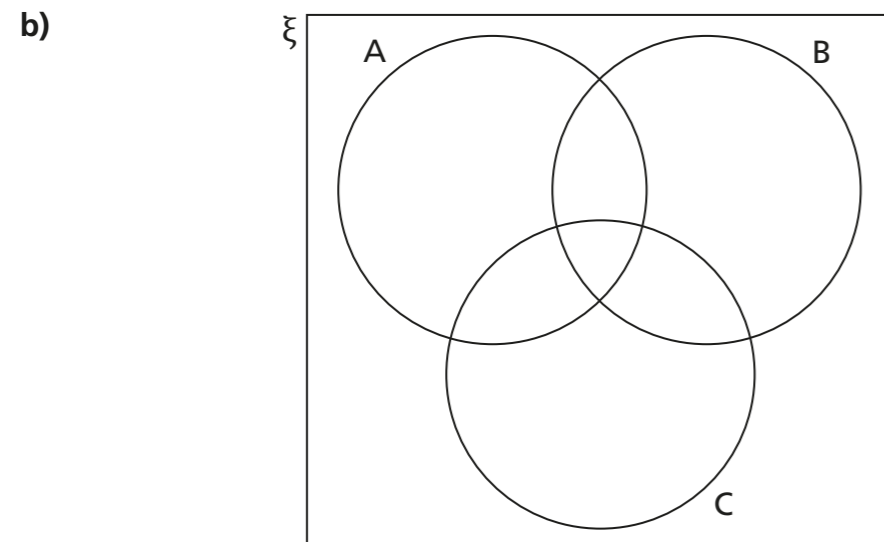
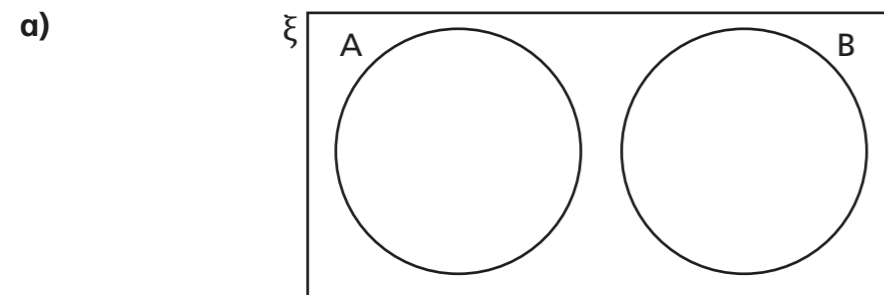
1 Here are two sets: A and B.



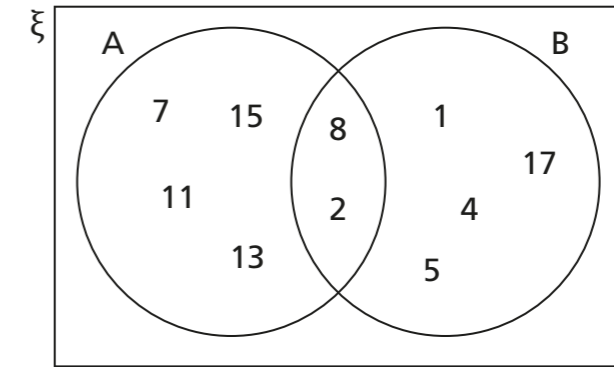
- a) Shade the region that represents $A \cup B$.
- b) Describe what $A \cup B$ means.



2 Shade the regions that represent $A \cup B$.

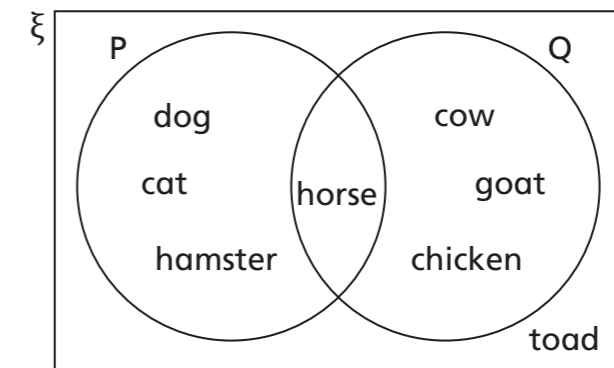


3 a)



Write the elements of $A \cup B$.

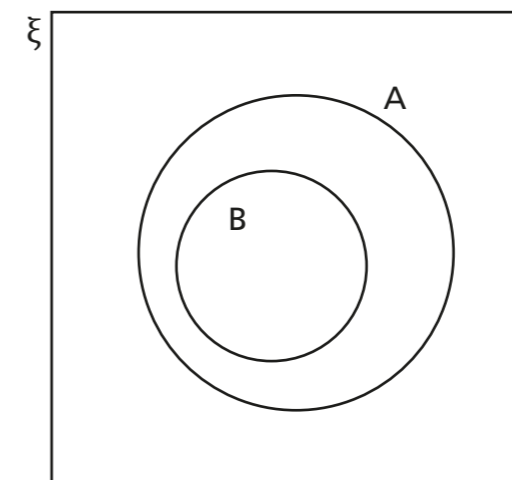
b)



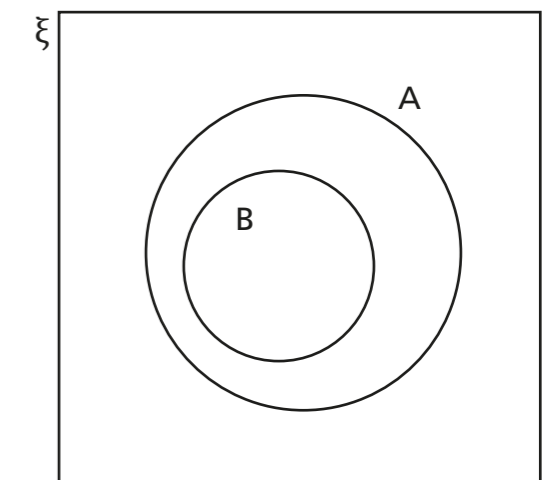
Write the element of $P \cup Q$.

4 Shade the regions.

a) $A \cup B$



b) $A \cap B$



- 5 A is the set of children who went to a theme park on a school trip.
B is the set of children who went to a museum on a school trip.

$$A = \{\text{Whitney, Filip, Rosie, Ron, Nijah, Brett, Amir}\}$$

$$B = \{\text{Eva, Ron, Kim, Tom, Filip, Huan, Amir, Mo}\}$$

- a) List the elements of $A \cup B$.

- b) The teacher says that $A \cup B$ is the children who went to both the theme park and the museum.

Explain why the teacher is incorrect.

6

$$A \cap B = \{-2, 3, 8, 11\}$$

$$A \cup B = \{-2, -1, 1, 3, 5, 8, 10, 11, 15\}$$

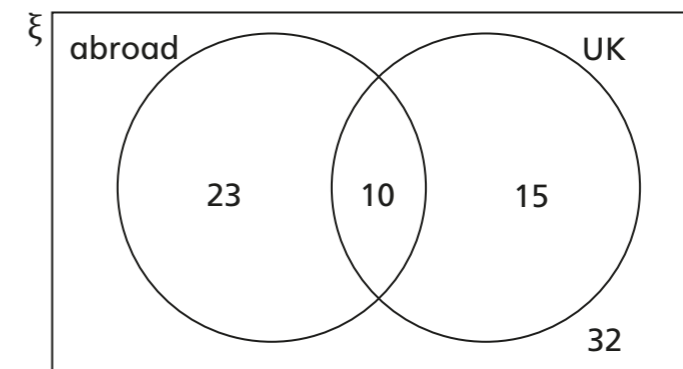
Draw a possible Venn diagram to represent A and B.

Compare your diagram to a partner's.

What is the same and what is different?



- 7 80 families were asked if they went on holiday abroad or in the UK.

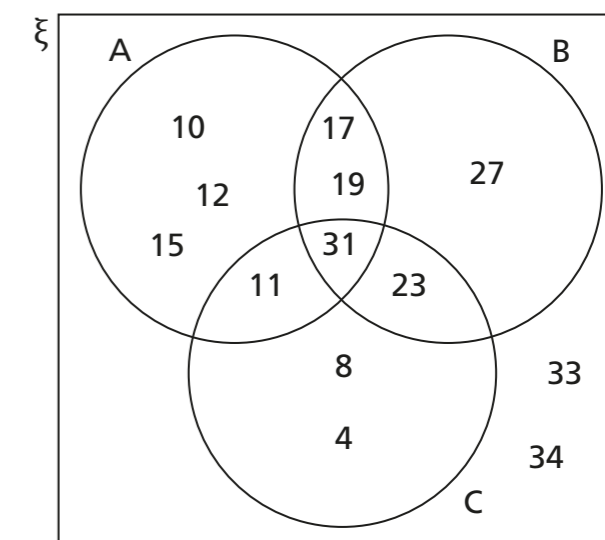


- a) How many families went on holiday abroad?

- b) How many families went on holiday either abroad or in the UK?

- c) How many families went on holiday abroad and in the UK?

- 8 Here are three sets: A, B and C.



List the elements of:

a) $A \cup B = \{ \text{_____} \}$

b) $A \cup C = \{ \text{_____} \}$

c) $B \cup C = \{ \text{_____} \}$

d) $A \cup B \cup C = \{ \text{_____} \}$

e) $(A \cap B) \cup C = \{ \text{_____} \}$

f) $(A \cup B) \cap C = \{ \text{_____} \}$

