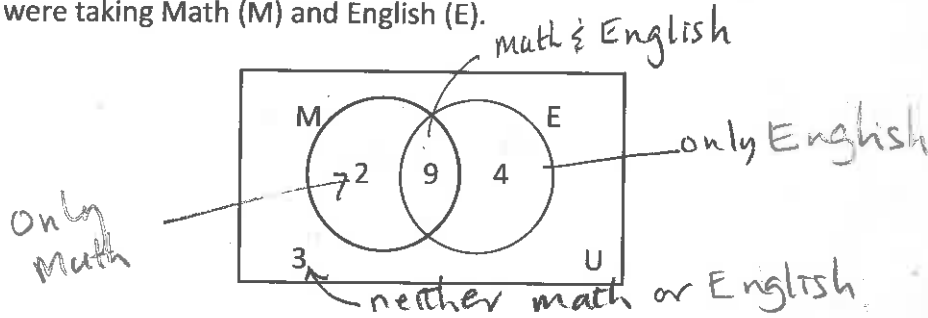


Example 1

I surveyed 18 students to see what courses they were taking. The Venn diagram shows the number of respondents who were taking Math (M) and English (E).



- a) Are M and E disjoint sets? How do you know?
No. Because 9 students are taking Math and English. (9 students have elements in common, so not a disjoint set.)
- b) How many students were taking Math?
11 students $2 + 9$
- c) How many students were taking only Math? 2
- d) How many students were taking both Math and English? 9 students (intersecting)
- e) How many students were taking English or Math? $15 = (2 + 9 + 4)$
- f) What does the 3 in the diagram represent?
3 students who do NOT take Math or English.
- g) What does the U in the diagram represent?
Universal set: All students who were surveyed.
- h) Determine $n(U)$. - number of elements (students) in the sets (surveyed)
 $18 = 2 + 9 + 4 + 3$

Example 2

The Venn diagram shown shows the set of clothing in Cam's closet, C.

- a) How many shirts are there? $3 + 1 + 1 + 1 = 6$
- b) How many shirts are red and black? 1
- c) How many shirts are red or black? $3 (1 + 1 + 1)$
- d) How many pairs of pants are black?
2
- e) Does Cam's closet contain any red pants?
None

